





Ernest Davis

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PAST IN THE PRESENT

WHAT IS CIVILIZATION?

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THE
PAST IN THE PRESENT
WHAT IS CIVILIZATION?

BEING
Ten of the Rhind Lectures on Archaeology
DELIVERED IN 1876 AND 1878

BY
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PREFACE.

THE publication of these Lectures, which were written under many difficulties, has been delayed in the hope that I should find time to rewrite them. The necessary leisure, however, has not come, and I have consented to publish them as they were delivered—in all their incompleteness, and with all their faults of style and arrangement. One change only I have made. I have struck out all merely amplifying, coupling, or recapitulating paragraphs. By this, perhaps, I have made them read less runningly. But those who have the printed Lectures in hand do not require such aids, and will gladly exchange them for shortness.

I do not need to point out the objects I have in view in the first six Lectures. To those who read them I think it will be plain that in showing how often the Past is seen in the Present—how many neo-archaic* objects and customs exist among us—I have sought and found opportunities of showing that the methods followed in archaeological inquiries should be as strict as those which are deemed necessary in other departments of science. I have chosen a way of doing this which is perhaps unusual, but which I thought likely to be effective.

I have endeavored, in a special manner, to show that strict methods should be followed in those archaeological inquiries which are at the same time anthropological, because in them

* Professor Rolleston suggested to me the use of this word.

there appears to be a special liability to fail in seeing the whole significance of the observations from which conclusions are drawn as to the antiquity and condition of the so-called Primeval Man.

Many things were said in the first six Lectures which had a possible bearing on the question of the condition of Early Man, and these were considered to be of such a character as to make it desirable that I should state my views as to the nature and origin of Civilization. Hence the last four Lectures. The views expressed in them appear to me so plainly, or rather so necessarily true, that it is difficult to believe they have not been previously enunciated. So far as I am aware, however, this has not been done. I am conscious that this part of my subject is incompletely worked out, but I do not think the broad conclusion will be affected by any side issues that may be raised.

I have to thank Captain F. W. L. Thomas, Mr. John Ritchie Findlay, Mr. Joseph Anderson, and Dr. John Sibbald, for reading the proof-sheets. I have also to thank Captain Thomas for allowing me to reproduce his drawings and plans of the Beehive-houses, and the Council of the Society of Antiquaries of Scotland for the use of a considerable number of woodcuts. Of the new woodcuts—which are numerous—some are notably inferior to others. Those which are faulty are made from poor sketches taken from the objects by myself. I chose rather to let their defects remain than to have them removed by the imagination of a draughtsman. It would have been an advantage if all the neo-archaïc objects had been drawn to scale; but this advantage I could not practically obtain. I have endeavored to supply the defect by giving, as often as I could, such measurements and weights as would show their size and character.

For the emblem on the title-page I am indebted to the kindness of my friend Sir J. Noël Paton. It is above praise.

It would be difficult to acknowledge all obligations; but I cannot omit the repetition here of acknowledgments elsewhere made of my indebtedness to the works of Mr. Alfred R. Wallace, Mr. Herbert Spencer, Mr. Hubert Howe Bancroft, and M. Fustel de Coulanges. I have found their writings full of suggestiveness, and I have had frequent occasion to quote from them in the last four Lectures which treat of Civilization. Their views, however, differ in important respects from those I have advanced. The quotations from their works, which are given in the Appendix at greater length than in the Lectures, indicate the direction of these differences.

A. M.

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PART I.

THE PAST IN THE PRESENT.

LECTURE I.

(18TH APRIL, 1876.)

THE SPINDLE AND WHORL.

IN the summer of 1864 I had occasion to visit Fetlar, one of the Shetland group of islands. As I walked from the landing-place to the nearest township I overtook a little boy, and, while I was asking him some questions about the people and places, I observed that he was giving shape with his pocket-knife to a piece of stone. At first I thought his occupation was the analogue of the purposeless whittle of the Yankee; but on looking more attentively at the results and progress of his cutting, I saw that he had some definite object in view, and I asked him what he intended to make out of the stone. "A whorl for my mother," was the ready reply. With equal readiness he gave me the half-manufactured whorl, which I regarded as an important *find*. It is made of coarse steatite or soapstone, which is called Kleberstone in Shetland, and which is soft and easily cut.

As we walked on, I asked the boy if I should find a finished whorl in his mother's house. He answered me in the affirmative, just as we were close to her door, and I went in and told her what he had said. She immediately produced two spindles, each with a soapstone whorl on it, and I carried them both away. One of them is figured on p. 20. The other was loaded with yarn, which had been spun just be-

fore my visit. In the same house I saw a third whorl, of a different form and made of clay. It is shown in Fig. 3.

During that day's sojourn in Fetlar I had occasion to visit many houses, and in most of them I found the spindle and the whorl in actual use.



Fig. 1.—Spindle and Steatite Whorl from Fetlar. Found in actual use in 1864. The Spindle is a roughly-shaped piece of fir wood, 11½ inches long, and about half an inch thick in the middle, tapering somewhat to each end. Instead of a notch at one of the ends there is a roughly-made button-like knob.



Fig. 2.—A more highly-finished Spindle and Whorl from the National Museum of Antiquities, Edinburgh, for comparison with Fig. 1. The Spindle, which is 9 inches long, is made of hard wood, and is smooth and well polished.

Perhaps, before I go farther, I should briefly explain what a whorl is, and how it happens to be an object of interest to antiquaries.

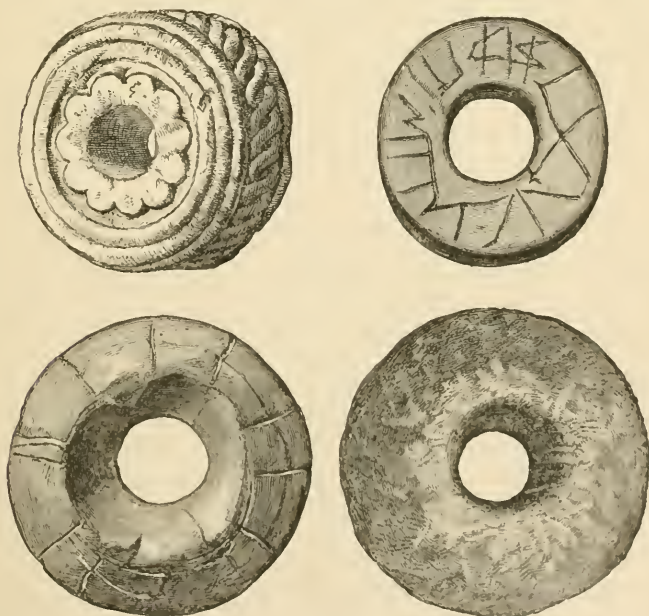
As it usually presents itself, a whorl is a perforated disk of stone, from an inch to two inches in diameter, and from a quarter to half an inch in thickness. It is placed on the spindle, in order to act by its weight as a fly-wheel—in other

words, to make the spindle rotate easily, while still unloaded with yarn.

Stone is the material of which whorls are commonly made, and their usual form is that of a perforated disk; but they are also made of other materials, such as bone or burnt clay, and they have other forms, such as the sphere or cone. When I say this much in way of description, I have perhaps said enough for my present object. All I desire is, that their general construction and purpose be understood. I am not giving an account of whorls. I propose merely to tell some things about them which appear to me to teach lessons of caution to the student of antiquities.



Fig. 3.—Clay Whorl from Fetlar. Full size.



Figs. 4, 5, 6, and 7.—Examples of Whorls from the Collection in the National Museum of Antiquities, Edinburgh. Full size.

I have still, however, to explain the interest which is taken by antiquaries in these objects. That such an interest exists is sufficiently shown by the fact that whorls appear in almost every museum of old things, whether in Europe or out of it; and they generally appear in considerable numbers. Nor is this otherwise than it should be, since whorls are found associated with the builders and occupants of our *brochs* and *circle-houses*; in Anglo-Saxon and Carlovingian graves; among the relics of the Swiss lake-dwellers; in the débris of that city which, according to Schliemann, had perished and was forgotten before the Troy of Homer had its foundations laid; among the vestiges of the Egyptians of the Pyramid times and the mound-builders of North America; associated, in short, with the "man without a story," not in special localities, but almost everywhere. An object of this kind has a proper place in collections of antiquities, since it may be almost if not quite as old as anything there. It is at least as old as the art of spinning, which is the oldest industrial art of which we have knowledge, and which, moreover, is an art practised at this present day by some of the least cultured people on the earth.

I have just said that I had seen this possibly ancient thing in process of being made, as well as largely in actual use, in the corner of a country which is in the very front rank of progress. The most primitive of all known methods of spinning is thus found holding its place among a people who have for generations been spinning by the aid of the most complex machinery—an art in its rudest state, side by side with the same art in its greatest perfection, both practised by the same people, the same in race, the same in capacity, the same in civilization, and, from many points of view, the same in culture. Can any one say that some of the inventions which congregate and culminate in our wonderful spinning machinery may not actually be due to a Fetlar man

whose mother knitted stockings for him, when a child, of yarn which she had made with the spindle and whorl? Such a thing is beyond question possible, for Fetlar yields men as good as any in the kingdom—as capable of doing that, or any other sort of intellectual work. Yet, if the woman I speak of were suddenly entombed, spindle in hand, and if, centuries after, she were exhumed, when nothing remained of her but her bones and her whorl, some zealous antiquary might show one reason at least for relegating her to prehistoric times.

As yet, only the island of Fetlar has been spoken of as the part of Scotland in which the spindle and whorl are to be found in actual use. But that island is by no means the only part. Women may be seen using them here and there all over Scotland, though chiefly, of course, in outlying regions, remote from highways or thoroughfares; that is, either actually remote or remote by some accident of position. This is stated as the result of personal observation. It will serve no present purpose, however, to detail the localities in which the spindle and whorl may still be found in use. The fact that they may be seen in Shetland, Orkney, and the Hebrides; in the counties of Ross, Sutherland, and Inverness; and in the district of Galloway, is enough to show that the art of hand-spinning is widely tenacious of life in Scotland.

In some districts, where it has fully and completely died out, a point of much interest presents itself. In certain parts of the main-land of Shetland, for instance, quite within hail of Fetlar, there remains no knowledge either of the existence or use of such things as the spindle and whorl among the people; yet, a century back and less, they were common objects there. So is it also with some parts of the outer Hebrides, where the sudden disappearance of the spindle and whorl, and the complete oblivion into which all about

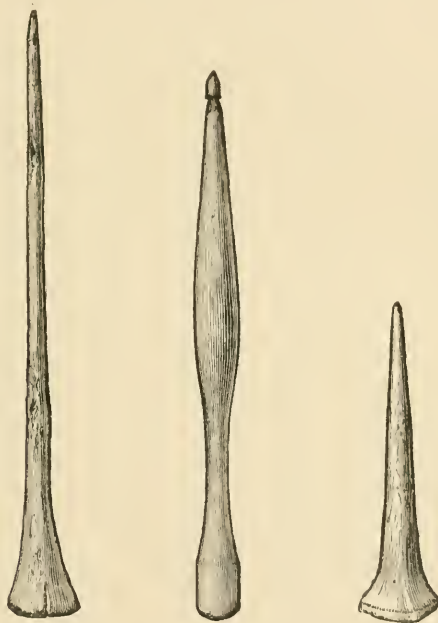
them has fallen, made a deep impression on my mind. It did so because it happens that in these same districts whorls are still to be frequently seen. Being of stone, they do not rot away like spindles, and they are often turned up in diggings about deserted townships. By those who so find them they are treated with a superstitious respect and care, being regarded as charms, and known under the name of *Adder Stones*. It was frequently found that no knowledge existed as to the purpose for which they had originally been made; and in many cases it was not possible to persuade the possessors of them that they were really commonplace objects, which had at one time, and perhaps not long ago, been used in spinning, and that they were entirely destitute of any qualities potent either to prevent or to remove disease and misfortune.

In the course of a few generations, it thus appears not only that all knowledge of the use of the whorl may be lost, but that there may grow round the object itself a religious belief in its supernatural origin and qualities.

That the whorl can live long and obstinately in the midst of conditions which ought to cause its death, has been shown to be true. It is now further shown that it may die suddenly, and all about it be quickly forgotten; and that, after a brief sojourn in the grave, it may reappear as a mysterious object having supernatural powers.

Out of some districts all knowledge of spindle and whorl alike may disappear. Both may be equally forgotten. But in other places the whorl may die out before the spindle, and this may happen in two ways. The form of the spindle may be so changed as to make it no longer necessary to weight it with a whorl. Instead of being a rod of wood, slender from end to end, it may be left thick at the lower end, where the mass of wood will then serve, like the whorl, the purposes of a fly-wheel (Figs. 8, 9, and 10). This is a late modification, and the reverse of an improvement, for it

does not do all that is wanted so well as a spindle armed with a movable whorl. It is one of those changes so often seen in the decline of a supplanted art, which are in the direction of a lower and not of a higher quality. It is a movement of deterioration indicative of coming death. The



Figs. 8, 9, and 10.—Spindles so formed as to make the use of a whorl unnecessary.

Fig. 8 is a polished and well-made Spindle, 12 $\frac{1}{2}$ inches long, found in a cottage at Corriebeg, on Lochiel-side. It has neither notch nor button at the upper end. The diameter increases greatly at the lower end, so as to serve the purposes of a whorl. Fig. 9 is more uncommon in its form. It is 11 $\frac{1}{2}$ inches long, and has a button-like knob at the upper end. It was found in Dathil, Inverness-shire, in 1865. The woman using it had a distaff or rock—very roughly made. Though she used the spindle, she was nevertheless the owner of a spinning-wheel. Fig. 10 comes from St. Kilda, and is 6 $\frac{1}{2}$ inches long. It has neither notch nor button at the upper end.

second way in which the whorl may disappear while the spindle remains in use is perhaps still more interesting. It has twice come under my notice; once in the island of Islay, and once in the parish of Daviot, within fourteen miles of the city of Inverness. In a remote corner of the last parish

I had occasion to visit a crofter's cottage in the autumn of 1866; and sitting at the door, on a *knockin' stane*, there was an old woman busily manufacturing yarn with a spindle.

At the end of the spindle, instead of a whorl, there was a potato. I carried off the spindle, yarn, and potato, and they are shown in Fig. 11.



Fig. 11.—A Spindle, 10 inches long, with the yarn on it, bought from a woman who was using it in the parish of Daviot, Invernessshire, in 1866. A potato served the purposes of a whorl. The upper end of this roughly-made spindle has a well-formed notch.

I happened to have a stone whorl in my pocket when I saw this woman, and I showed it to her, but she had no knowledge of any such object—had never seen such a thing on the end of a spindle—and had used a potato, in the way I found her using it, for more than a quarter of a century. She thought, however, that she had once heard her mother speak of something which did away with the need of the potato. On being asked how she managed in the summer months, when potatoes were scarce, she answered that her spinning was done in the short and idle days of winter.

This woman had lived within a couple of hours' drive of a spinning mill and tweed factory, in which the best machinery was employed, yet she continued to use the spindle, with a potato for its fly-wheel! Though much closer to the centres of progress than the Fetlar woman, the art of spinning, as she practised it, was in a still ruder state. From a potato to a stone whorl is progress. From a stone whorl to a potato is degradation: just the degradation, however, which we encounter as an old art wanes when a new art supplants it. The old art, in such circumstances, does not flourish and grow stronger and better; it sickens, and dies out by a process of decline.

This point will be repeatedly referred to and illustrated, and it is desirable at once to make it well understood. Perhaps nothing will better show what is meant than recalling to mind the influence of the discovery of printing on the production of manuscripts. Whenever it became possible to multiply books by printing, less and less labor and skill were devoted to the multiplication of them by handwriting. Such manuscripts as were still produced no longer exhibited painstaking and taste, but were executed in a comparatively careless and slovenly manner. So it probably is with every other art or contrivance, when supplanted by a superior art or contrivance.* Imperfect performance precedes death.

It has been said that the Daviot woman, when seen, was appropriately sitting on a *knockin' stane*, an object which also figures in our collections of antiquities, so that the picture she presented was remarkable in more respects than one. It would perhaps be speaking strongly to say that the lesson it taught was impressive, yet so it seemed to me; and it is

* Dr. George W. Balfour has furnished me with an interesting illustration of the dying out of a practice by a process of degradation. It is supplied by the *sampler*, which was worked by nearly every little girl in the country forty years ago, and for a hundred years and more before that time, but which is now rarely, if ever, worked by any one. Dr. Balfour has given me five of these samplers—the work of five generations of ladies in one family. They are all dated at the time of working them; but no one need consult the dates in order to arrange them according to age. The oldest shows by far the most careful work and the best taste. As they come down to the latest they get ruder and ruder, till we reach those wonderful tubs with inconceivable fruit-trees or flowers in them, or those still more wonderful and less conceivable peacocks, worked with coarse thread on coarse canvas, and not in any respect superior, either in taste or execution, to the paintings or sculpturings of the lowest savages we know. All the young ladies who worked these five samplers belonged to a chain of families living in affluence and refinement, and it was assuredly not a want of culture or taste which gave origin to those marvellous birds and decorative borders in the later of them, for the parents of some of the workers were among the appreciators and patrons of Raeburn. Sampler-work was a practice dying out, and death came to it in the usual way, by a process of degradation. This is the whole explanation.

my present object to endeavor to lead others to see and read such things as are now referred to, in the way I have myself been led to see and read them.



Fig. 12.—A *Knockin' Stane* from Shetland, more or less like that on which the Daviot woman was found sitting. This stone is used in the making of pot barley.



Fig. 13.—The Mallet used in the making of pot barley with the *knockin' stane*.

There was a certain harmony in the picture of this Daviot woman—an old-world look all round it. It has happened to me more than once to fall in with some such accompaniment as the *knockin' stane*, to give to a busy worker with a spindle a sort of prehistoric look. One such woman I well remember. She lived in a dreary solitude, far up the Glenkens of Galloway; and, as she spun, she crooned to a forgotten air an almost forgotten verse of the old ballad of "The silly blind Harper of Lochmaben Toon." I was all the more impressed by my visit to this woman, because, on my way back, and not far from where she lived, I saw the only instance of the primitive loom that I have seen in actual use in Scotland.* The web was narrow, and

* When I visited this woman I was accompanied by the Rev. George Murray, of Bahmaclellan, and I am indebted to his son, the Rev. George Murray, Jr.,

the weft was struck home with a piece of wood, in shape like a paper-cutter or table-knife.

These things are spoken of in order to show that the whorl, as it is seen in use in Scotland, does not stand out with an isolated prominence as both a living thing and a relic of antiquity, but is often found in harmonious companionship with other objects or practices, equally disclosing the past in the present.

It is perhaps desirable here to point out that it must not be supposed that what has been said about the whorl in Scotland is something true of Scotland only and peculiar to it, for here and there all over Europe the whorl is still in use, and in some parts of it in common use. I am not writing the history of the whorl, but merely reading some passages from its history, which disclose certain lessons that I

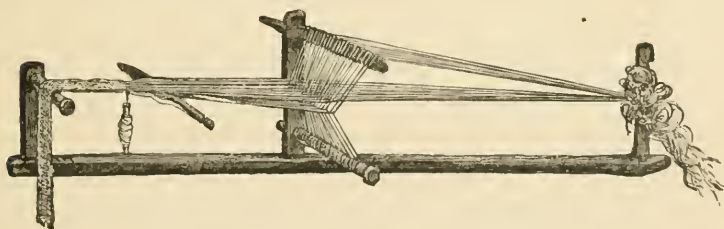


Fig. 14.—Old Scottish Loom found in Mid-Calder by the Rev. George Murray. The weft is driven home by the spatha. The shift in the warp is very ingeniously and simply effected.

desire to draw—lessons which, to my thinking, fit us for examining and correctly estimating some of the evidence

for an opportunity of figuring an excellent specimen of the simple loom (Fig. 14). Four such looms are known to me: one is in the Industrial Museum, Edinburgh, and comes from Fair Isle, in Shetland; one from Balmaclellan, obtained through the assistance of Mr. Murray, Jr., is in the National Museum of Antiquities, Edinburgh; and the other two, from Carsphairn and Mid-Calder, are in the possession of the Rev. George Murray, but have been sent to the Society of Antiquaries, for the purpose of being examined and figured.

which has been held to reveal the condition of the so-called primeval man and his age on the earth.

I NEED not, and shall not go to all the ends of the world in quest of illustrations which our own country affords, and with many of which my opportunities of observation in Scotland have made me acquainted. On the contrary, so far as possible, my witnesses shall be chosen from objects and practices in the midst of which we live, even though their homeliness may at first seem a defect, and though near neighborhood and familiarity may, to some extent, strip them of the obscuring enchantment which remoteness and strangeness often lend. Yet, though I shall do this, and shall in these lectures speak as often as possible of what is to be found and seen in Scotland, I shall not avoid, when the need arises, any length of journey to find what suits my object. Accordingly, I proceed now to say something of the spindle and whorl as they are used in India.

I have spoken, and it is customary to speak, of the manufacture of yarn by the spindle and whorl as a rude practice, such as we might fittingly encounter among a barbarous and uncultured people. What it is desired now to show is that we are wrong as well right in this. That which has superseded hand-spinning is certainly a thing vastly superior to it, and is assuredly the outcome of a higher culture; yet, for all that, there went brains to the invention of the spindle and whorl; and it is beyond question that it can accomplish certain feats which no other machine ever invented can equal. It is a fact, though it may surprise some to learn it, that the hand-spinning women of India produce a yarn which is finer and has fewer filaments in it than any yarn otherwise or elsewhere manufactured. Repeated and serious efforts have been made by European spinners to pro-

duce the *gossamer thread* out of which are woven those marvellous muslins of Dacca to which have been given the poetic names of *The Evening Dew*, *The Running Water*, and *The Woven Air*. The spindle used in the manufacture of the yarn out of which these muslins are made is a slender piece of bamboo, not much thicker than a stout sewing-needle, and the whorl is a little ball or pellet of unbaked clay. The lower end of the spindle rests usually on a piece of shell, because, slender and light as the apparatus is, it is nevertheless too heavy to hang by the delicate thread.

All this is in one sense rude enough. A slender piece of bamboo, a little ball of unbaked clay, and a fragment of a shell, are all the spinner needs. But the machine made of them is admirably suited for its work, and yields results which the best mechanics of Europe have not been able to equal, much less to surpass. "With all our machinery and wondrous appliances we have hitherto been unable to produce a fabric which for fineness or utility can equal *The Woven Air* of Dacca—the product of arrangements which appear rude and primitive, but which in reality are admirably adapted for their purpose."* With some reservation, therefore—certainly with some qualification—must we speak and think of spindles and whorls as the implements of barbarous and uncultured people; as capable of doing nothing but rough, coarse work; and as showing little skill in their contrivance. If it appears that



Fig. 15.—Hindoo woman spinning fine yarn. From Dr. Forbes Watson's "Textile Manufactures of India," 1866, p. 64.

* "Textile Manufactures of India," by Dr. Forbes Watson, 1866, p. 64.

there is a certain cleverness in the idea of the spindle, and a capability in it to do good work, which require us to qualify such epithets as rude and primitive* when applied to it—if this results from a study of the spindle, much more certainly will it result from the study of many other objects which, by general consent, we accept as evidences of nothing but barbarity and incapacity in those who make and use, or who made and used them. It appears to be established that the spindle is the best implement yet contrived for spinning extremely fine yarn. As regards that particular manufacture, therefore, it cannot be treated with contempt, but must, on the contrary, be treated with respect. It is the most efficient known instrument for at least one purpose; and not to employ it, when the fulfilling of that purpose is an object, would be stupid. If muslins like those of Dacca are wanted, Dacca spinning must be employed till a better mode of spinning yarn of the necessary quality and fineness is discovered. Neither the simplicity nor the antiquity of the contrivance would necessarily show its employer to be wanting in culture or in capacity. It would be nearly as correct to describe the man who uses a stone knife to cut glass, and a bone knife to cut paper, as being in his stone age and an uncultured barbarian. It is true he is employing tools and cutting implements made of the materials out of which the man of the stone period made his tools and cutting implements, but he only uses them for those purposes in which they prove more efficient than any tools he can make either of bronze or iron.

Before we and the Hindoo spinners part company, there is one other thing regarding them to which I should like

* Primitive is a word of uncertain meaning, and I use it rarely, and always unwillingly, lest it should mislead. It is difficult, however, to discard it altogether, so much has it come to be employed in writings on prehistoric antiquities.

to refer. It is this. They do not belong to a savage, barbarous, and uncivilized people. Progress in India has certainly not taken the directions which it has taken among us, or among the nations of Europe generally; but there may be great progress on lines which diverge very considerably from those on which we travel. All civilizations, whether in times far apart or in the same times, are not of one pattern. The differences, indeed, may be wide and deep. They are so, in point of fact, between us and the races of India. These races, however, have shown a distinct and decided culture and civilization of their own. They possess a literature of no mean order; they have worked successfully in the fields of scientific research; they have acquired accomplishments in the application of the fine arts to manufactures which, at this very day, all the nations of Europe are trying to understand and copy; they co-operate, and there is a division of labor among them; they have laws, and armies for defence and aggression; and they have religious beliefs, which we regard as utterly and deplorably wrong, but which, nevertheless, are far from destitute of lofty conceptions, while the sincerity of those beliefs is attested in conduct with at least as much self-sacrifice and conscientiousness as Christian nations show in testimony of the reality of the convictions which they avow.

It appears, therefore, that what we commonly regard as the rude and primitive stage of an art may be the only stage of that art which is known and practised even among a civilized and cultured people, whose ability to advance beyond it we cannot possibly doubt. The only spinning among the natives of India is hand-spinning. They cannot be said to have yet passed beyond that to the invention and use of spinning machines.* It is not required for our pres-

* This statement remains correct, notwithstanding the fact that spinning mills have of late years been erected in India by British traders there, and though it

ent purpose to show why they have not done so. It is only necessary to show that such is the fact, and to add that what is thus seen to be true of the spindle and whorl may be found true also of many other similar things.

Livingstone, in his first book of travels, says that "the mode of spinning throughout South Central Africa is so very like the same occupation in the hands of the ancient Egyptians, that I introduce a woodcut from the interesting work of Sir Gardner Wilkinson."* Accordingly, he gives a woodcut, with this written below it: "Ancient spinning perpetuated in Africa at the present day." In other words, the barbarous and savage tribes of South Central Africa make their yarn at this day by the aid of the same contrivance as that which was used by the ancient Egyptians, among whom the powers of the mind were carefully and successfully cultivated, and who have left abundant traces of a civilization which is still the wonder of the world. I reproduce and give on the opposite page the woodcut from Wilkinson's work, and by the side of it I place another woodcut, showing one of our own countrywomen—an Hebridean—similarly engaged.

It seems desirable to inquire here what we are taught by the fact that savages now use a simple stone-age contrivance which cultured Egypt used thousands of years ago, with which cultured India may be said still to content itself, and which even cultured Europe goes on employing to a larger extent than is commonly supposed. Does it not mean that the stone-age man contrived a way of doing important work which civilized and cultured races found efficient, with which some of them remain satisfied, and which

is quite possible that the natives may copy what they see, and that spinning by machinery may ere long be correctly described as a practice among the races of India.

* "Missionary Travels in South Africa." Lond., 1857, p. 399.

has not been entirely discarded even by the most advanced races? May it not further mean that the stone-age man intellectually is not altogether contemptible, whether we refer to the man whom we find to-day in his stone age or to the man of that stone age which we place in the remote past?

It would have been easy to have written of whorls from a point of view very different from that which has been chosen here. I might have spoken of the various materials



Fig. 16.—Ancient Egyptians spinning.
From Wilkinson.



Fig. 17.—Modern Scotchwoman spinning.

of which they have been made; of the different forms which have been given to them; of the rudeness of some, and the high finish of others; of the strange places and circumstances in which they have occasionally been found, and the great age which has consequently been given to them; of their ornamentation; of the symbols which have been found on them; of inscriptions in curious characters, and of rude figures of animals cut on them; and of many other such things. If I had spoken of these things only, I should have clothed the whorl with marvels and antiquity, and should have left it perhaps an object of greater curiosity,

but an object, as I think, having less real interest than has been given to it by the use of its story in the way which suited the present purpose.

There is sometimes, it appears to me, an unwillingness to look at all sides of objects classed as ancient, lest something should be discovered which might reduce their age, and render them possibly modern and commonplace. To some, no doubt, it does make such a thing as a whorl a less interesting and curious object to know that it may be either of very great age, or, in the most literal sense, a thing of yesterday; but the study of antiquities has ceased to be the study of the merely curious, and takes rank now with the study of history. The love of the wonderful, however, still holds sway to no small extent, and often shows itself in the manner alluded to, that is, in a certain unwillingness to see what may overthrow accepted and cherished opinions. The very matter of spinning furnishes apt illustrations of this. For instance, the discovery of cloth in the mounds of Ohio was regarded as a fact so novel in itself, and so much at variance with the prevailing ideas as to the degree of civilization and knowledge of the arts among the mound-builders, that it was considered necessary to hesitate about making it public. It is easy to understand this feeling. It was probably thought that further research might modify the significance of the discovery. Yet why should there be hesitation about the publishing of what is believed to be a fact? Prevailing ideas are not things to be protected. If they rest on error or imperfect information, why should they not fall? The whole material from which archaeologists draw their conclusions is as yet very scanty; and most of their conclusions can only be safely stated as probably correct in view of the information we possess, and as liable to change with a fuller knowledge.

It so happened that subsequent discoveries left no doubt

that the art of weaving was known to the mound-builders of North America. It was proved that they clothed themselves, in part at least, in a cloth made of a uniform thread, and woven with a warp and woof. Prevailing ideas were therefore modified, and it became necessary to concede a higher degree of culture to the mound-builders than had previously been conceded. Nay more: on the assumption that the Red Indian did not possess the art of spinning and weaving when he first became known to the white man, it was deemed necessary to alter the prevailing opinions even so far as to suggest that the prehistoric mound-builder was possibly in some way linked to the civilized races of Central America, or was, at least, a more highly cultured man than the Red Indian as first known to the European.

This suggests the remark that, though the prehistoric man in Europe, so far as we know him, is always more or less of a barbarian, it is otherwise in many parts of the world, as, for instance, in Central America and Cambodia, where high and remarkable civilizations, about which little or nothing is now known, have been followed by something like savage states of society, and where the prehistoric race was very great indeed when compared with the existing race. In these and many other countries the historic is the barbarous race, and the prehistoric the civilized race.

The absence of the evidence of a knowledge of spinning by the mound-builders placed their culture and capacity low in the prevailing opinion. That opinion, however, rested merely on negative evidence, and was upset by the discovery of cloth, and of the implements for making it, in the Ohio mounds. This discovery carried opinion far in another direction, dis severed the mound-builders from the existing savage Red Indians of North America, and lifted them into a possible alliance with the ancient civilized races of Central America. This later opinion, however, again rests on nega-

tive evidence, that is, on the absence of a positive knowledge of whether the Red Indian did or did not know how to spin and weave when the white man found him. The record on that point seems as yet to be silent. We have neither proof that he did, nor proof that he did not, know how to spin. That information, however, may some day be supplied.

I take this illustration from America because it occurs to me as apt, without meaning to disclose by it the present state of archaeological knowledge there. That knowledge is rapidly becoming deeper and wider, in consequence of the assistance given to research both by the Union and the State Governments, and also as the result of the ability shown by those who conduct it. All that the illustration is intended to do here is to show how unsafe it is to rest conclusions on the mere absence of some piece of information which, if obtained, might lead to conclusions altogether different, perhaps contrary. Strict methods of scientific research do not allow us to conclude, because something has not been found, that that something does not exist, and never will be found.

THE chief inferences which appear to flow from what has been said are the following:

1. A mode of meeting one of the requirements of man's existence in all cold or temperate regions, which is so simple as to be commonly spoken of as rude and primitive, may nevertheless continue to be practised among a people who have the foremost place in the march of progress, who have even acquired a special distinction for their success in contriving other modes of meeting that particular requirement, and who send the products of these contrivances to all the markets of the world. In other words, an old art may long refuse to disappear wholly, even in the midst of conditions which seem to be necessarily fatal to its continued existence.

2. On the other hand, the complete extinction of such an

art in certain countries, or parts of countries, may come suddenly, from causes which we may not be able to assign; and all knowledge and recollection of it may disappear with a like suddenness. In a few generations all about it may be so entirely forgotten that, when the people turn up the implements used in the art which have proved too hard for the teeth of time, they clothe them with mysteries and superstitions, and treat them with veneration.

That this may happen is proved by what has been said about the conversion of the whorl into an *Adder Stone* or *Charm*. In like manner the stone axe or celt becomes a *Thunder-bolt*, and supernatural qualities are assigned to it. The lapse of ages is not necessary for this, as we naturally think and are accustomed to be told. A single century can do more in such matters than we commonly acknowledge. The dress of superstition, which clothes objects of which the use is forgotten, is far from being a thing rarely seen, though it presents itself in different aspects, and with varying degrees of completeness. It is interesting, however, to remember that it is the handiwork of the rude or so-called stone-age man which becomes an object of veneration in countries with a high civilization. The reverse would be much more easily understood. That a minie-rifle should be worshipped by a Bushman seems a not unnatural thing. It is more difficult to see why, to nearly all the cultured nations of Western Europe, a stone celt becomes a *Thunder-bolt*, a whorl an *Adder Bead*, and a flint arrow-head an *Elf Dart*, and why these relics of a complete or comparative barbarism should be venerated in the midst of civilized and cultured people. The man who ought to know that these objects are merely the tools or weapons of his barbaric forefathers is the very man who worships them; and it seems to me that if we wish to study correctly the history of the human race as a whole, we can neither ignore nor omit the study of these curious wanderings from conditions of high culture and civilization.

3. When an old art dies out, in consequence of being supplanted or superseded by a new art, which does the same thing in a practically better way, the dying-out may be, and perhaps always is, by a process of debasement or degradation. It is not easy to over-estimate the value of this inference, since it means that the rude forms of an implement may follow as well as precede the more finished forms—that it would be unsafe to say of two specimens of the same implement that the ruder was necessarily the older—and that, of any particular kind of implement, the rudest forms of all may be the very latest, or those fashioned when the implement had all but passed out of use.

4. We sometimes, without good reason, speak contemptuously of an implement or contrivance as rude and primitive. Looking at the thing itself, rather than at its purpose and the way it fulfils it, we think of it as the outcome of a poor and feeble state of mind. But on careful examination we may find it suitable for its work, capable of doing it well, and indicating more ingenuity in contrivance and more skill in construction than we were ready to suppose from a superficial examination.

If we desire only to find the evidences of a want of intellectuality in the works either of the early or of the existing savage, we shall certainly find them, and probably little else. But if, on the other hand, we look also for signs of intellectuality and of a capacity for culture, we shall as certainly find more of these than we have been prepared to expect.

5. A very simple and a rude method of doing work, such, for instance, as hand-spinning, may be the only way of doing that work which is practised even among races whom we cannot call barbarous, and who are widely separated from each other both in time and space, as, for example, among the peoples of ancient Egypt and present India.

Still further, the very same rude and simple method of doing the work in question may be the only way of doing

that work among races whom we unhesitatingly call barbarous, and who are also widely separated from each other both in time and space, as, for example, among the prehistoric lake-dwellers of Switzerland and the existing savages of South Central Africa.

6. In all scientific inquiries, but more, perhaps, in archaeological investigations than in any other, conclusions formed on merely negative evidence are to be distrusted.

7. We may fall into error if we fix the intellectual capacity of a nation, a community, or an individual, as low, because we find that they practise, or he practises something which we call, and perhaps correctly call, rude and primitive. Such a thing furnishes no proof of want of capacity; frequently, indeed, it does not even furnish proof of want of culture. The mental power of those Scotchwomen who still use the spindle and whorl is not a whit inferior to that of those who do not use it, nor is their culture in any degree or respect below that of their countrywomen generally in a similar social position.

So much for the inferences which appear to me to flow from what has been said about whorls. It may be thought that I carry those inferences too far, seeing that they are all drawn from the story of one object. It seems to me, however, that they are fairly drawn, and I think it an advantage at once to reveal the general character of the lessons which are to be taught by the stories of many other objects in the lectures which follow.

PERHAPS surprise may be felt that I should begin by treating of an object so seemingly insignificant, and that I should do so abruptly, and without some prefatory remarks to disclose the purpose at which I aim. But the subject I have chosen is a difficult one, and I think a new one, and I

ask to be allowed to approach it in my own way. The difficulty consists chiefly in this: Many people—almost all reading people—have some knowledge of the startling and precise conclusions which have been enunciated regarding the degraded condition of the so-called primeval man, and the immensity of his age on the earth; on the other hand, few have a correct comprehension of the reasoning on which these conclusions rest, or of the nature and value of the data from which the reasoning proceeds. I think, therefore, that it will be a useful work to beget a well-founded scepticism in regard to matters, the half-sight or one-sided examination of which may lead to an unscientific use of them.

LECTURE II.

(21ST APRIL, 1876.)

CRAGGANS.—QUERNS.—NORSE MILLS.—KNOCKIN' STANES.—TAINT-
ED MILK AND FISH.—BURSTIN.

WHEN I visited the island of Lewis, in 1863, I had the advantage of the company of Captain F. W. L. Thomas. In driving from Uig to the village of Barvas, on the west coast, we passed a stone-breaker sitting at the roadside eating his dinner out of a vessel which struck us as remarkable. We found it, on closer examination, to be even a stranger thing than it seemed to us as we first caught sight of it. We waited till the stone-breaker had eaten its contents, and then we carried it off; but we had acquired little information regarding its history, because the stone-breaker and we had no language in common.



Fig. 18.—Craggan from Barvas;
4½ inches high.

Before reaching Barvas we had a détour to make and some business to transact. When we got there, we found that our acquaintance of the roadside had preceded us. He had hurried home to tell of the profitable sale he had made, and while our horse was feeding we were visited by many people carrying vessels like the one we had bought, and offering them for sale.

They are called *craggans*, and we learned that, at a period

by no means remote, they had been made in many of the villages of The Lewis, though at the time of our visit their manufacture was chiefly, if not entirely, confined to Barvas. The following woodcuts (Figs. 19 to 23) sufficiently show their form and character.



Fig. 19.—Barvas Craggan;
7½ inches high.



Fig. 20.—Barvas Craggan;
8½ inches high.

We were told that it was woman's work to make them, and one of the makers was pointed out to us as particularly skilful. Knowing that, after a couple of days, we should have again to pass through Barvas, we engaged her to show us the process of manufacture. This she duly did.

The clay she used underwent no careful or special preparation. She chose the best she could get, and picked out of it the larger stones, leaving the sand and the finer gravel which it contained. With her hands alone she gave to the clay its desired shape. She had no aid from anything of the nature of a potter's wheel. In making the smaller craggans, with narrow necks, she used a stick with a curve on it to give form to the inside. All that her fingers could reach was done with them.

Having shaped the craggan, she let it stand for a day to dry, then took it to the fire in the centre of the floor of her

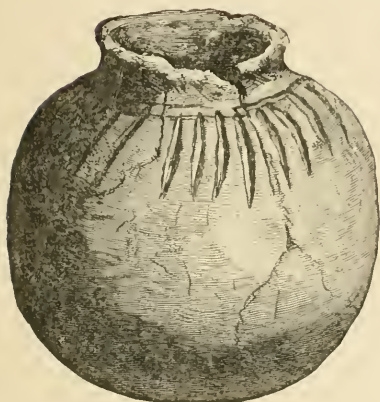


Fig. 21.—Barvas Craggan; 8 inches high.

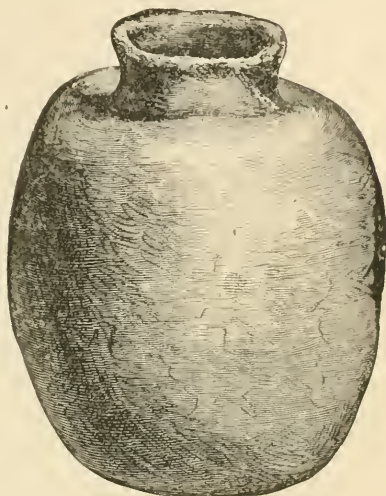


Fig. 22.—Barvas Craggan; 9 inches high.



Fig. 23.—Lewis Craggan. Tolsta.

hut, filled it with burning peats, and built burning peats all round it. When sufficiently baked, she withdrew it from

the fire, emptied the ashes out, and then poured slowly into it and over it about a pint of milk, in order to make it less porous.* The craggan was then ready for use and sale.

It is desirable at once to realize, with regard to these craggans, that there is nothing known in the way of pottery more rude. They are made of coarse clay containing sand and gravel; they are not baked in an oven, but in an open fireplace; they are shaped with the hands, without aid from any sort of potter's wheel; they are unglazed; they are globular and without pediment; they are nearly always entirely destitute of ornament, and such ornamentation as does occasionally occur on them is composed of straight lines made with a pointed stick, or the thumb nail, or a piece of cord. The rudest pottery ever discovered among the relics of the stone age is not ruder than this, and no savages now in the world are known to make pottery of a coarser character.

It is surely something very startling to be able to say this

* *Tiree Craggans*.—The following notes are taken from a letter addressed to Mr. William MacGillivray, W. S., by Dr. Alexander Buchanan of Tiree, where craggans of small size are still occasionally made. He says that the only craggans now made in Tiree are small globular vessels, in which milk, drawn directly into them from the cow, is warmed and given to persons showing a tendency to consumption. Milk so treated is said to be "milk without wind," and is supposed by the people to have special curative effects. There never was, Dr. Buchanan thinks, any large factory of pottery on the island. Each little community had its own potter. In making the craggan now, he says that the red or blue clay, after kneading, gets its form without the use of anything like a potter's wheel, of which there is no trace or tradition, though in Gaelic legends no article is more frequently mentioned than the craggan. When shaped it is first dried before a common turf-fire, and then placed in the fire and subjected to great heat. When removed, fresh milk is poured into it, in order to give it a better surface, and make it less porous. One hundred and twenty years ago, he says, craggans were the only articles in common use in the island for culinary purposes; large ones were used as pots for boiling, others were used to keep milk, and others as milking-pails; they were even used as churns. But, he says, the process of manufacture has not improved with the progress of knowledge.

of the staple manufacture of a Scottish village in the nineteenth century.

The wonder would have been less if I had been able to go on and say that the people of Barvas are really savages, clothed in skins, and eating raw flesh; but I am not able to say anything of the kind. In intellectual power and in their mode of living they are just what their neighbors are. Besides, though it is true that they are now nearly the only community making this pottery, this singularity is of recent date. Within the century in which we live its manufacture was common all over The Lewis—all over the Hebrides, indeed—and it was not unknown in the villages on the west side of the mainland. It was an art practised by people not inferior in mental capacity to the people of Scotland generally—by people who sent their sons into the centres of progress to occupy there as good a place as any, either as artisans, seamen, merchants, or professional men.

The house in which the woman lived who made this pottery for our instruction was squalid and wretched enough; but still we saw in it cottons from Manchester, crockery from Staffordshire, cutlery from Sheffield, sugar from the West Indies, tea from China, and tobacco from Virginia. In that house, nevertheless, these rude craggans were made for sale. They were abundant in it, and were largely in actual use, as indeed they were also in many of the houses of the townships round about.

Here, then, was a woman, living in a wretched and perishable hut, built (without cement) of unquarried and unshaped stones, busily manufacturing just such pottery as was made by the early prehistoric inhabitants of Scotland—just such pottery as is now made by some of the most degraded savages in the world—yet her comforts and wants were ministered to not only by the great towns of England, but by the Indies, China, and America.

If we buried her—house and all—what might a digging on the spot disclose a century hence?—her bones, her whorl, her quern, and her craggans. That Sheffield, Manchester,



Fig. 24.—Barvas Pottery; 5 inches high.

India, China, and America had sent her of their products and manufactures there would remain no evidence. There might be a puzzle, however, about the contribution from



Fig. 25.—Lewis Teapot. Imitation of Staffordshire Ware.

Staffordshire—the broken crockery—and perhaps, as the consequence, an ingenious speculation about an early and a late occupation of the ruined hut by successive people at long intervals and in different stages of progress and culture.

Expecting a visit from curious strangers, proud of her skill, and anxious to display it, our Barvas potter had prepared for us, in addition to the craggans, some imitations of Staffordshire ware and some models of animals. They were all equally like, or rather perhaps equally unlike, the



Fig. 26.—Barvas Copy of a Teacup.



Fig. 27.—Barvas Copy of a Sugar-basin.

objects of which they were understood to be copies. We obtained from her some of these imitations, and they are figured (along with some others of the same character, for which I am indebted to Dr. Robert Paterson of Leith) in the woodcuts 24 to 27. Some models of animals we also

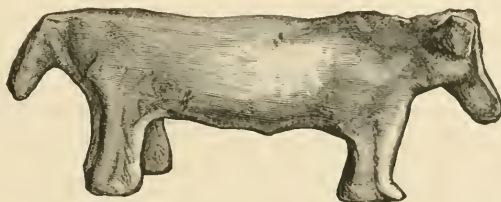


Fig. 28.—Barvas Cow; $5\frac{1}{2}$ inches long and 2 inches high.

carried away; but they have nearly all been lost. One of them, however—the model of a cow—remains, and is shown in Fig. 28.

The figure of this animal may seem to imply even a lower culture and capacity than the craggans. It is just such a thing as a child might make, and nothing superior to it in the way of modelling was seen. Better work, and none

worse, in the direction of the fine arts, was done by the Cavemen. Yet the old woman who fashioned the cow and the craggans was full of shrewdness—a theologian in her way, well versed in Church quarrels and in the obligations of the Poor Law, and quite able to become well versed in a score of other things if the need and opportunity had arisen. Have we any sufficient reason for believing that the Cave people were inferior to her, or, for that matter, inferior to any of us in capacity for culture?

When Captain Thomas and I reached Stornoway with our treasures, and exhibited them in the hotel, we found that the craggan was nearly as great a curiosity there as it afterward turned out to be in the south. Even the distinguished proprietor of the island was scarcely aware of the existence of such a manufacture in his insular principality.

With this suggestive fact I conclude my notice of the Barvas pottery, formulating only three inferences, which seem fairly to flow from what has been said:

1. That the very rudest known form of an art may co-exist in a nation with the highest—the Wedgwoods of Etruria with the Macleods of Barvas.

2. That it would be wrong and stupid to conclude from this that the nation must be composed partly of savages and partly of a highly cultured and civilized people.

3. That persons capable of immediately receiving the very highest culture may practise an art just as it is practised by the most degraded savages of whom we have any knowledge.

I RETURN to the man whom we found eating his dinner out of the craggan, to say that he probably made that dinner of meal ground in his own house. It is certain, at least,

that the people of the district in which he lived still use the quern or hand-mill—an object which may be of great antiquity, and which properly finds a place in archaeological collections, but which may also, in the most literal sense, be a thing of yesterday, fabricated and used by people enjoying the advantages of a high civilization.

In Scotland rotating querns are found in hut circles, eirde-houses, crannogs, and brochs, and they certainly may belong to the prehistoric, if not to the stone period. Yet they are not only still in use in certain parts of Scotland but they are in common use. Those I myself have seen at work, I should count not by tens but by hundreds. They are most numerous perhaps in Shetland, but they are common in the Orkney and Hebridean Islands; and in the west coast parishes of Sutherland, Ross, and Inverness they can scarcely be called rare. Resting the opinion on what I have personally seen, I should be inclined to think that a census of the querns still in use in Scotland would show their number to be thousands. This mode of grinding corn—a mode which dates from very early times, and is also still employed by the savage races of many parts of the world—can, therefore, by no means be said to have died out of Scotland. So far otherwise is the fact, that there are not only thousands of people in Scotland who still use querns, but there are people who earn part of their livelihood by making and selling them. One man in Shetland, who thus occupied himself, I visited; and I found the selling price of a quern to be from three shillings and sixpence to five shillings. This price is lower than it is believed to have once been, because querns are now more rudely and more coarsely made than they were of old. The cause of this degradation is plain: only the poorer people are now the purchasers. It would be useless, therefore, to spend time in the manufacture of a well-finished and ornamented quern, because it would find no buyer. The wealthier of the community get their meal

from the south, or they send their oats to be ground at the water-mills which exist here and there even in those parts of the country where querns are still common. Only the poorer class—constituting, however, the multitude in every district—to whom the sending of corn to mills at a distance would prove difficult, continue to employ the quern. Thus again it is seen that when a contrivance which has been widely used dies out, it does so by a process of degradation ;

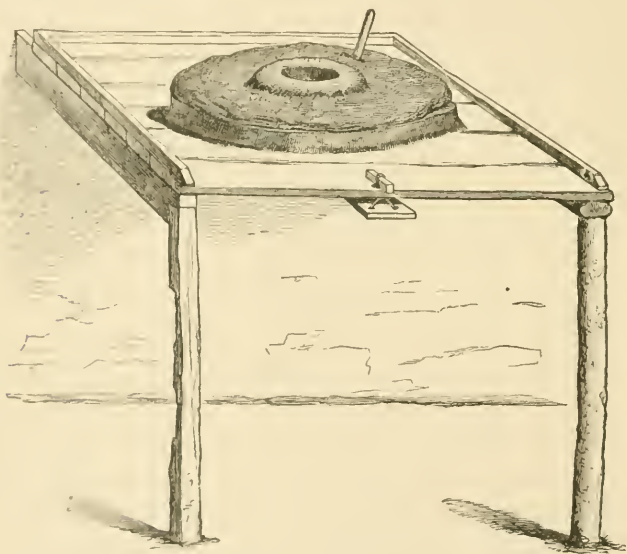


Fig. 29.—Quern from North Yell.

and it follows that when a rudely made quern is found, it becomes at least as probable that it is later, as that it is earlier, than more finished specimens, providing there is nothing in the circumstances in which it is found to reveal its age.

Nothing rougher than the quern which is shown in Fig. 29, and which is now in the Edinburgh Museum of Antiquities, can easily be conceived. Yet I found it just as it

stands in the island of North Yell. I was hospitably entertained in the cottage in which it was bought, and ate some bread made of meal which it had ground. Two specimens of the meal which had that day been manufactured by it were carried away, and are now in the Museum with the quern. *Two* specimens were taken, because the quern is capable of grinding coarse and grinding fine.

This leads me to say something of the construction of querns. Till I saw them at work I had myself an imperfect knowledge of this, and I have not found many others better informed. I thought the contrivance a much ruder one than it really is.

The quern proper usually stands on a wooden tray, one end of which is built into the wall, and the other supported on two legs. Its position in Lewis houses is generally in the porch. In Shetland it usually stands in the living or day room. The under surface of the nether stone receives little or no fashioning, and the level is obtained by bedding it in clay. The hole in the centre of the under stone is tightly filled with a piece of wood, through which there is an aperture just large enough to allow the wooden spindle to pass. The lower end of this spindle rests on a narrow board, one end of which lies loosely on a recess in the wall, which acts as a ledge, and is usually prepared for the purpose by the simple process of taking a stone out of the wall. To the other end of the board a string is attached, and this string passes double through a hole in the front of the tray, and then over an oblong wooden button which prevents it from falling back. By turning this button the two plies of string can be twisted and so shortened, or untwisted and so lengthened. In this way the position of the board, on which the lower end of the spindle rests, is raised or lowered. The spindle, of course, rises or falls with it, and since the upper stone rests on the upper extremity of the spindle,

it is clear that it also will rise and fall. Thus it is that the power of grinding coarse and grinding fine is obtained. The actual method of obtaining the same end in our most complete mills is little more than a modification of the arrangement which I have just described, and which is thus both very ancient and quite modern.

The upper stone is always the better finished of the two. Through the hole in its centre the quern is fed with corn. Across this hole, and lying loosely in two slots cut in the under surface of the stone at the edges of the feeding-hole, is the wooden socket, which receives the upper end of the spindle.

The handle of the quern is of wood, and is fixed in a hole sunk into the upper stone, near its margin. Occasionally, when the quern is of a largish size, the handle is on a different plan: it is much longer, and one end of it lies loosely in a cup or hole, situated like the hole in which the short handle of the smaller quern is fixed, while the other end goes up to the roof of the cottage, and passes loosely through a hole in a joist or rafter. In this way two persons at opposite sides of the quern can easily and safely be engaged together in turning it. A fixed handle, long enough to allow two persons to work the quern, would be apt, by its leverage, to break off the bit of the stone outside the hole in which the handle is fixed.

The meal falls from all sides of the quern upon the tray, and is brushed up and swept out of one of the corners of the tray, where the ledge is intentionally wanting, into a basket of straw, made like a beehive.

An examination of the woodcut, Fig. 30, representing a diagrammatic section of the North Yell quern, will make this description easily understood.

I may be wrong, but it seems to me that I have not been describing a contemptible piece of machinery, exhibiting no skill or ingenuity in its contrivance. The ends, it is true,

are attained by means which are very simple; but that of itself does not give inferiority to a contrivance. It is true also that the hand of man is left to move that which elsewhere, in what we call the centres of progress, is moved by water or steam. But are there not circumstances in which

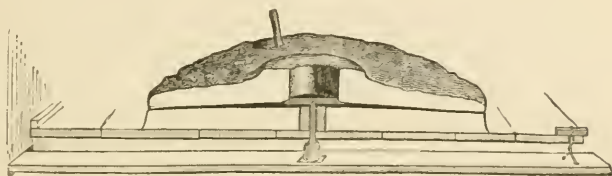


Fig. 30.—Section of Quern from North Yell.

this may be the outcome rather of wisdom than of ignorance or stupidity? Till the conditions in which the Lewis and Shetland people live are greatly altered, would large steam-mills or water-mills be a gain to them. While the roads are few and bad, while the means of communication are difficult, and while the population continues to be scattered over the islands, instead of being in its bulk drawn together into villages on a well-roaded main-land, will it not best meet the wants of the isolated crofter to grind his corn at home, and would it not be foolishness rather than wisdom to build large steam or water mills before there were roads leading to them, and before there were crops within easy reach to keep them working?

In large towns the grocer roasts our coffee and grinds it by steam-power; but in country-houses each family has its little oven and little mill.

These appliances are not so complicated or perfect as those of the grocer. In comparison with his they may be called rude. But the man who gets his coffee roasted and ground for him while in town does not sink in intellectual power when he betakes himself to his detached country residence, and begins to roast and grind it for himself in a

rude way, and with comparatively poor machinery worked by the hand. On the contrary, he shows ability in supplying himself with what he wants in the face of difficulties. The Shetlander or Lewisman, when he moves south, does not bring his quern with him. He takes advantage of the new circumstances, and allows steam or water to grind corn for him as readily as any man among us. The music of the grinding of the quern* may remain one of the pleasant memories of his childhood; but he shows a perfect ability to adapt himself to his altered surroundings, and he comports himself at once as to the manner born.

In the case of some old things there may thus be excellent reasons why they should continue to live and be used. In certain circumstances they do the work they are wanted to do better than anything else, and the reasons why the man of the present age continues to use them may, perhaps, be not very different from the reasons which led to their invention and use by the prehistoric man.

So much for querns. What has been said about them leads to these conclusions among others:

1. That a simple and seemingly rude method of accomplishing work—practised both by the historic and prehistoric savage—may long continue in extensive use among certain sections of a people who are in a high state of civilization, for reasons which are both assignable and sufficient, and which have nothing to do with inferiority either of capacity, or culture, or civilization.

2. That a seemingly simple and rude contrivance may

* The *cronach* stills the dowie heart,
The *jurram* stills the bairnie;
The music for a hungry wame
Is grinding o' the *quernic*.—ROBERT JAMIESON.

be found to have not inconsiderable merits as an effort of mechanical ingenuity, when it is carefully and fairly studied.

3. That mere rudeness of workmanship—that is, of execution, apart from the mechanical idea—cannot be safely used as an evidence of great age.

It may possibly appear to some that I only reiterate here the conclusions which have been already announced. Even if that were true, it might prove serviceable in my effort to present things in a light in which, so far as I am aware, they have not been presented before; but I think it will be seen that I make progress, and enunciate inferences here, which, if not altogether fresh, are broader and deeper than those which I have previously enunciated.

WHAT has been said about the quern appears almost to imply that there are no water-mills in such places as The Lewis and Shetland. But this is not the case. The towns of Lerwick and Stornoway, just as we should expect, are supplied with water-mills constructed on the plan of the mills of the south. But in addition to these there are, here and there, over many of the very districts in which querns may still be seen at work, small water-mills of a peculiar and primitive construction. They go under the name of Norse Mills. Usually two or three townships situated near each other, each township consisting of three or four families, combine to erect one of these mills. When such a mill belongs to a single tenant, it is said to be valued over to his successor, in the event of a change, at about three pounds; and when it belongs to a township or townships, and is therefore larger, its value is said to be about seven pounds. It needs a certain concentration of the population and breadth of farming to bring into existence even one of these small structures.

They are driven by horizontal wheels, the floats or vanes which receive the impulse of the running water being fitted obliquely into a sort of nave on the spindle. The motion is



Fig. 31.—So-called Norse Mill of Shetland.

thus given directly to the millstone. In other words, no change of motion is necessary. The lower end of the spindle, which is generally shod with iron, turns usually in a stone socket, but sometimes in a socket of iron. The upper millstone is fed from a hopper hung from the roof by straw ropes. To the hopper is attached a feeder, which receives a vibrating motion from a stone fastened to it by a piece of string and lying on the surface of the upper millstone, the roughnesses of which, as it goes round, makes the string irregularly tight and slack, as the result of the varying drag. This mode of giving the proper motion to the feeder is as clever as it is simple.

The building is of the most insignificant character. The door-way is often so low that access cannot be gained except by stooping. The size of one which I measured was found to be $2\frac{1}{2}$ feet wide by $4\frac{1}{2}$ feet high. The grinding-stones are rarely more than 3 feet in diameter, sometimes being

as small as 2 feet 3 inches. They deliver the meal on the floor all round them, on a space marked off by a low ledge of wood. The contrivance for making the stones grind fine or coarse is nearly the same in character as that described when speaking of querns.

The general appearance of a Norse mill, as it is seen in Shetland, is shown in Fig. 31; and the plan of its construction is made sufficiently clear by Fig. 32 to render further explanation unnecessary.

It must not be supposed that there is a miller attached to

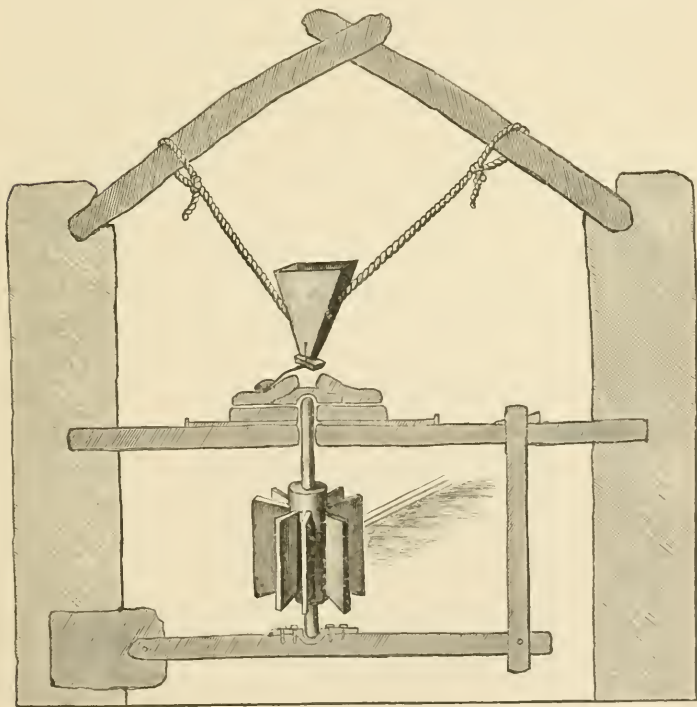


Fig. 32.—Rough diagrammatic section of Shetland Norse Mill.

each of these mills. When there are more proprietors than one, any man who is part proprietor, when he wants meal, goes to it with his corn. Of course the co-proprietors must

so arrange that they do not go together. In point of fact, the so-called Norse mill is nothing but a large quern driven by water, and it is usually the property of a township or a combination of townships, instead of being the property of an individual. In other words, these mills occur where there is a certain density of population, and where the difficulties of communication are not very great; that is, they are the outcome of the very conditions which, when still stronger, lead to the erection of the more pretentious mill familiar to us in the south. They occupy a place between it and the hand-quern corresponding to the modified circumstances of which they are begotten; and they are not the outcome of an intelligence either superior to that of the users of the hand-quern or inferior to that of the users of mills driven by steam, or driven by water overshooting or undershooting the wheel.

I never found the door of a Norse mill locked. Many of those I saw were unprovided with anything of the nature of a lock. I never detected any indication of an effort to pass to the undershot or overshot wheel, and the reasons for this appeared good and sufficient. In the first place, water was in such abundance as to make the economizing of it no object; and, in the second place, the introduction of the overshot or undershot wheel would have complicated the machinery by necessitating a change in the direction of the motion. This, moreover, would have added greatly to the cost, and would have left the crofters with the care of a piece of machinery which would be liable to get out of order, which they could not easily repair, and which might prove to them a white elephant. The mill, as they make it, does all the little they want it to do in the way which best combines economy with efficiency. Many of the people who build these mills know, as well as any of us know, the general superiority of an overshot wheel, and the unfitness of the

wheel they use to do anything more than the small amount of work which they require of it. Not a few of them thoroughly understand the waste of power in the mill they make. Speaking of this to a crofter, he said: "Quite true; but I borrow all the power I want from the burn as it flows past, and if I get all I need, where is the foolishness in leaving the rest unused? I take what I require in the easiest, cheapest, and most direct way; and why should I waste my substance and labor on a fancy? It seems to me that my going to the deep-sea fishing in an open instead of a decked boat is a much stronger evidence of my being incapable and uncultured than the fact of my using either this mill or the hand-quern to grind my corn."

That men in their quern age, or their craggan age, or their whorl age speak and think in this fashion is not fancy but fact. Whether men of the stone age did so, or could do so, nothing remains to tell. A few centuries hence—even one century hence—how little will remain of the Shetlander of to-day to reveal his mental power and culture! How much, on the other hand, of what may then be turned up will tend to lead to conclusions far from the truth!

The single inference which I ask to be drawn from what has been said of the Norse mill, is that there may be two ways of looking at rude and primitive practices or objects; and that these ways do not lead us to like conclusions when we attempt to use such practices and objects as aids in studying the condition of early man.

I have still one other object to notice before ending this lecture.

WHEN speaking of the Daviot woman who used a spindle with a potato on it for a whorl, it was said that she was seen

sitting on a *knockin' stane*. It is of the stone on which she sat I am now about to speak, that is, of the *knockin' stane* or primitive pot-barley mill.

This contrivance is still found in common use in Shetland, and in occasional use in many other parts of Scotland. It consists of a large stone, often a boulder, with a cup-like excavation on one side. Into this cup the barley is placed after being well dried, and it is then struck repeatedly and steadily by a wooden mallet. As the blows fall, many of the grains start out of the cup, but a woman or child, sitting opposite the man who wields the mallet, keeps constantly putting them back.

A *knockin' stane* which I myself saw in actual use in Shetland is shown in Fig. 33. The mallet which was used



Fig. 33.—*Knockin' Stane* from Shetland.



Fig. 34.—The Mallet used in the making of pot barley with the *knockin' stane*.

with it never reached Edinburgh, but I obtained another mallet from Mr. Gilbert Goudie, which is represented in Fig. 34.

Anything ruder than this way of making pot barley could not easily be found; yet the *knockin' stane* does work of

fair quality, and this fact should not be forgotten when considering the significance of its rudeness.

THE tastes of a people are sometimes modified and formed by such customs and practices as have been described, with results which appear to us at first sight to indicate a lower nature. It would be easy to give many illustrations of this, but two will suffice.

The craggans, in consequence of their porousness, generally contain organic matter in a state of putrescence. And I have been told that, as the result of this, when fresh milk is put into a craggan it soon becomes tainted—so soon that there arises a practical difficulty, where craggans are much used, in obtaining sweet milk, the taste of which is thus unfamiliar to the people, who come to like best what they know best, and to prefer what is unpalatable to us.

That we can be trained, either intentionally or unintentionally, into liking the taste of things which the general palate finds disagreeable, is evidenced by the chewers of tobacco or Turkey rhubarb. There is an illustration of it, much resembling the Lewis relish for tainted milk, in that preference for tainted fish which Shetlanders show, as the result of the still common habit of wind-drying their fish. I have heard fish in this state greatly praised by the most refined people in the islands, and a more refined class than the upper class in Shetland it would be difficult to find anywhere. Perhaps we do much the same thing as the Lewis people do in regard to their milk, or the Shetlanders in regard to their fish, in liking game when the flavor is high. It is said that this taste arose from force of circumstance, just as in the cases already mentioned. In days when con-

veyance was slow, game shot in Scotland was necessarily "high" when it reached London; and thus the flavor became fashionable. With such facts as these in mind, is it not unsafe to draw strong conclusions as to the intellectual state of savages from the fact that we find many of them eating and relishing food which we detest?

Burstin is the Shetland name for corn which is dried either in a kettle over the fire, or by rolling hot stones among it. It is intentionally dried to the extent of roasting. At first, however, the roasting was not intentional, but in such a method of drying it became unavoidably an accident of frequent occurrence. The corn so injured was not thrown away; it was ground and baked into cakes. These cakes have a peculiar and, to persons unaccustomed to it, a disagreeable flavor; but the flavor is now so much liked by Shetlanders that the corn is dried to the extent of roasting for the very purpose of making burstin bread. Thus it has happened that, out of a frequently occurring accidental injury to food in its preparation, a taste has originated which makes the preparation of food in that way no longer accident but design.

When I talked just now of putting fresh milk into craggans, it brought to my mind an occurrence which shows how real all I have said about them is, and how truly they are things in common use. I remember once meeting a girl crossing a dreary moor in The Lewis, on her way home from the summer sheilling to which she had gone to milk the cows. She was a handsome, healthy, good-looking girl, barefooted and barelegged, with a *brat* over her head to keep it and her face from the sun—the milkmaid of the poet, as she presents herself in The Lewis. On her back she carried a flat, open creel, half-filled with weeds, and on

these weeds nestled two large globular craggans full of milk, each with its mouth stopped by a handful of freshly-pulled grass. As we passed, we exchanged the usual salutation. She went her way, unconscious that she was in my eyes an archaic person ; and I went mine, finding in what I had seen the lesson which I now attempt to teach.

LECTURE III.

(25TH APRIL, 1876.)

THE BLACK HOUSES AND THE BEEHIVE HOUSES OF THE
HEBRIDES.

IN the last lecture it was shown that a kind of pottery, as rude as any pottery known to exist, is not only found in actual use, but is regularly manufactured in a part of our own country, and by people of as good mental powers as any in the land.

The rudest form of an art may thus coexist with the highest, the potters of Barvas and of Staffordshire being of the same period and of the same nation. This does not, however, imply that the nation in which it occurs consists partly of savages and partly of "civilized men," for it appears that persons living under an advanced civilization, and capable of immediately receiving a high culture, may practise an art as rudely as either the prehistoric or the existing savage.

Such conclusions as these may have a close bearing on the study of the condition of early man; and to show this I quote a passage from one of the many recent works on this subject. Dr. Daniel Wilson, in speaking of the varied and expressive examples of the ceramic art, observes that "to the ethnologist they are not less valuable than the characteristic fossils by which the geologist determines the relative ages of the underlying strata."* As I write, another reference to this subject

* Wilson's "Prehistoric Man," 1862, vol. ii., p. 78.

comes to mind, and I quote it also to show what Dr. Wilson meant, and how fully he is supported, in saying that examples of pottery are to the student of man very much the same thing as fossils to the geologist. Baker says: "Nearly all savages have some idea of earthenware; but the scale of advancement of a country between savagedom and civilization may generally be determined by the examples of its pottery."* Generally perhaps, but certainly not always, as we have seen. Fossils of this kind appear sometimes to travel far out of the strata to which they are generally supposed to belong. In the craggan, for instance, we have an object which we are accustomed to regard, if I may so speak, as belonging to the lowest and earliest strata of man's condition or existence, presenting itself in the highest and latest strata. And it may be fairly asked if it is at all probable that this is the only thing of the kind which is thus so strikingly out of place? Is it not probable, on the contrary, that it will prove but one of many when we begin to look for them?

Thus lecture will be devoted to a notice of some rude forms of dwelling which are still to be seen in Scotland; and I shall first describe a typical specimen of the old black house, in which thousands of people have been born, have lived, and have died, in the islands of Lewis and Harris. A similar house is to be found in many other parts of Scotland, but the old Lewis house, as I saw it fifteen to twenty years ago, suits my purpose better than any other.

In the following woodcut I give a sketch of one of these houses, taken from a photograph by Captain Thomas, and also the ground-plan of another.†

* Sir Samuel Baker's "Albert Nyanza," Lond., 1866, vol. ii., p. 49.

† Both of the woodcuts show these structures to be better finished than they really are. This is true in a special degree of the ground-plan, which is much

The typical old black house of The Lewis is not simply a long unbroken range. It rather consists of a major block,



Fig. 35.—Black House of The Lewis, from a Photograph.

of forty or fifty feet, with a small porch-like wing at one side in front, and a larger projection or attachment at the

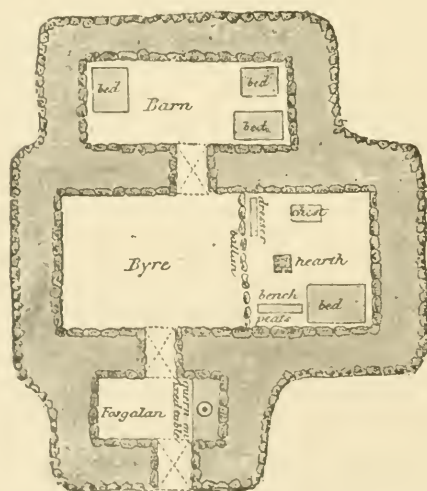


Fig. 36.—Ground-plan or diagram showing arrangement of rooms, furniture, etc., in one of the Black Houses of The Lewis.

other side behind, which last serves as a barn. Access to all is gained by one door. By this the so-called porch is entered,

too regular and square. It is merely a diagram showing the arrangement of the apartments and the disposal of the furniture.

and on one hand there is frequently found that which is now seen in most museums of antiquities—the quern—not kept as a curiosity, but as a thing for daily use. Opposite this is the stall for lambs and calves. In passing from the porch to the major block the byre is first encountered; and in the summer, after the planting of the crops, there is here a step down. In early spring, however, instead of a step down there are steps up; for the dung of the cattle, which rarely leave the house during the winter, is allowed to accumulate—there being only one annual cleaning of these byres.

In those districts where horses are used, when spring comes the end of the house is often partially pulled down, so that the horse and his panniers may enter to be loaded on the spot.

The peat-reek, with which the houses are always filled, and the soot in the thatch and on the rafters, both acting as antiseptics, combine to lessen the injurious effects which might be expected to result from living on the edge of this heap of decomposing animal and vegetable matter.

At the other end of the central or major range the human beings live; and their portion of the dwelling is not cut off from that belonging to the brutes by the faintest pretence at a partition. The separation is nothing more decided than the curb-stone of a foot-pavement on a country roadside—simply a line of rough stones to mark it off.

At a convenient point, about the centre of the part now reached, is the fire; and from the rough, undressed, soot-begrimed rafters above there hangs a rope or bit of chain, on which the pot is suspended.

On one side of the fireplace, supported on two piles of turf, or on two large stones, is a plank, which is the seat of the men of the household. Sometimes, however, there is no plank—nothing, in fact, but a bench of sods. On the other side there is often a rough three-legged stool for the use of the wife. The children and dogs crouch by the fireside in

the warm ashes. On the woman's side, with its back to the cattle, there is occasionally a rude *dresser* with shelving, to hold such plates and basins as belong to the household; and beside it two or three pots generally find their place when out of use.

I do not remember ever to have seen a table. A chair of any kind is a most unusual object. The teapot, the tea-kettle, and tinned iron vessels are also rare. The supply of modern crockery, even of the coarsest description, is confined to a few plates and basins. In the parish of Barvas and part of Uig it scarcely amounts to this; because the people of these districts still use to a considerable extent the native pottery which has already been described.

At the farther end of the apartment, if it may be so called, which we are presently describing, stand the beds. These are not the true box or shut-in bed. Such a form would involve too much wood and too finished workmanship. They usually consist simply of four rough, upright posts, bound together by narrow side-stretchers, on which rests a wooden bottom covered with loose straw. The two uprights which are farthest from the wall often reach the rafters, and are attached to them by straw ropes. Upon these there is a sort of inner roof constructed, and this inner roof is often covered with divots. The need of this roof-within-a-roof depends on the fact that the outer roof is often far from water-tight. All sexes and ages occupy these beds. Indeed, they are often the only beds possessed. If the family be large, however, there may be one or more similar beds constructed in the barn, in which the chest containing the Sunday clothes and other such valuables is also kept.

The house itself is constructed of rough, unhewn, and unshaped stones. The walls are five or six feet thick, with an outer and inner facing of dry stone-work, the intervening space being turf. The rafters do not overlap the outer face of the wall, but terminate toward its inner edge, so that the

rain falls from the roof into and not over the wall, which therefore is of necessity nearly always damp.

The walls are generally not more than six feet in height : and on the top of them, round the roof, there is often a foot-path, on which children, sheep, fowls, and dogs may be constantly seen. In one case the public foot-path to a neighboring township led me over the end of one of these houses, provision being made for getting up and down by stones or steps projecting from the wall.

The rafters consist of undressed crooked branches of trees, bound together with ropes of straw.

The thatch is of straw, loosely put on, and held down by heather ropes, which are weighted at the end with stones. This thatch is removed every year for the sake of the soot it contains, which is regarded as a valuable stimulating manure. In order to increase the deposit of soot in the thatch there is no smoke-hole ; and further, with the same object, the straw is heaped thickly on at the top, so that the roof does not finish in a sharp ridge, but is more or less semicircular in its outline. The inside of the house, therefore, is a constant cloud of peat-reek, which the eyes of those who are unaccustomed to it cannot tolerate. The lowest possible seat affords the best means of partial escape from this irritation. Such smoke as is not deposited in the thatch oozes out over the whole roof, giving the house, when seen from a distance, the general appearance of a dung-heap in warm wet weather. The object of the roof is not simply to protect from rain and cold but to accumulate soot, and it is consequently never completely water-tight. After heavy rain the water comes through and blackens everything on which it falls, bringing with it the glistening pitchy pendicles of soot which usually fringe the rafters.

There is no glazed window ; nay, there is frequently not even a hole in the wall for the admission of light. The absence of this is very general in the old Lewis house of

the type I am describing. Such light as gains admission enters by the door, or through one or two small holes in the eaves of the roof at the top of the wall, or through chinks from deficiencies in the construction of the roof.

The door is very low—sometimes barely five feet high. It is commonly made of undressed wood, but I have seen large straw mats used as doors, and I have also seen doors made of a cow's skin stretched on a rough wooden frame.

The dwelling I have thus described is known as *the black house*, distinguishing it thus from *the white house* of stone and lime; and there are thousands of them, more or less exactly of the same character, in various parts of Scotland. The liberal and enlightened management of The Lewis will probably soon cause their disappearance from that island. They are everywhere, indeed, becoming less numerous than they once were.

I shall not dwell on the general wretchedness of these dwellings—the absence of privacy and separation of the sexes, the presence in the house of the cattle and their accumulated dung, the want of comforts, etc. For my present purpose it is sufficient if I draw attention to certain features of the building which seem to me to have a special interest and importance. These are: (1), The thickness of the wall—often six or seven feet; (2), The way in which the wall is built—two facings of dry stone with turf between; (3), The very low door—often barely five feet high; (4), The absence of any light-hole or window; and (5), The want of overlapping of the wall by the roof, so that such rain as does not simply wet the roof or fall through it runs down into the body of the wall. To this last feature, more perhaps than to any of the others, I attach importance. If it were to be accepted as indicative of the intellectual state of the people, that state would certainly be of the very lowest. To appear to show an ignorance of the principle of the arch

is nothing in comparison with this. To suppose, indeed, that the Lewis arrangement is really the outcome of ignorance and stupidity, is to suppose a degree of ignorance and stupidity which have scarcely been found among any people on the face of the earth, either now or in any past time. In point of fact, however, this plan of roofing the Lewis houses is not an expression of want of mind or want of knowledge. The people who adopt it know perfectly well the effects and advantages of making the roof throw the rain over the wall. Why they do not act up to the measure of their knowledge may be a puzzle, but it is beyond all question that it does not arise either from want of capacity or want of culture.

It is difficult, of course, to think of a community living in houses like those I have pictured as being in any other state than one of great degradation. Such a conclusion, however, would be incorrect. The Lewis people, as a whole, are well-conditioned physically, mentally, and morally; and there is certainly much more intelligence, culture, happiness, and virtue in those black hovels than in the comparatively well and skilfully built houses which go to make the closes of the Canongate and Cowgate of Edinburgh, or the closes of any similar great city. There is much more degradation, indecency, ignorance, stupidity, and savagery in the slums of great cities than in the most outlying and backward part of the country. The dregs of the population are precipitated into our closes and alleys, which are peopled by persons who are not only uncultured, but to a large extent incapable of culture. On the other hand, the people found living in these black houses are not the dregs of a community, but a whole community. This constitutes a great difference between the population of the closes and vennels of large cities and the people of outlying regions who are cut off from the suck of the stream of progress by their remote-

ness and isolation, but who show no unfitness to go with it. Very few, almost none indeed, rise into greatness out of the population of the slums of our large cities. The material out of which greatness is evolved is not bred in them; and the recruits which their population receives consist largely of waifs and strays dropped into it from the more cultured classes—from the classes, that is, who have either the culture of trades or professions, or who are independent of work. In the general advancement of a people there is always a going down of some and a going up of others. Progress implies action or work on the part of all who really share in it. Without that work there is no true and full participation. Many are incapable of its performance, and such persons drop away, and constitute the dregs of the advancing race. They of course derive advantage from what others do, but they are not themselves, as individuals, farther on or farther up. When we speak of a nation's reaching a high culture, it is never meant that all the individuals composing that nation, but only that some of them, have reached it. A high civilization reaches all the members of a nation, but a high culture has never been known to do so. Civilization, indeed, can only appear in the nation or aggregate; it is only the aggregate which exhibits it; but culture is personal, and all persons are not capable of receiving it. Those who have the capacity for high culture, whatever be the measure or quality of the culture they actually receive, form the class which yields leaders. But leaders are always few in number. Those who follow them with something like closeness may be called an army; but it is seldom a great army. The multitude, the millions, are down in the dirt—not only uncultured, but to a large extent incapable of culture. The lowest of them congregate in the slums of great cities, which are thus peopled by a selected class—picked out by this incapacity from the community as a whole. They no longer include either the really or the po-

tentially great. Both are absent. But at least the potentially great do or may form a part of every whole community, even though it be in a rude and backward condition. Just as the shotts of a highly-bred flock of sheep are inferior to the entirety of a flock which is lower in breeding, so the people of the slums of our great cities—the shotts of the population—though they live in slated houses of stone and lime, are certainly inferior to the people whose dwellings have just been described, and who are a whole community, possibly including many who have a potential though undeveloped greatness.

THERE is a feature of the architecture of the dwellings just described which is, perhaps, more strictly archaic than anything yet mentioned. It is only, however, of occasional occurrence. I refer to the sleeping-places or beds which are sometimes constructed in the thickness of the walls. These are mere holes or recesses into which the people creep. They connect this architecture, however, with the oldest known buildings in Scotland. There are people now alive—respectable, self-supporting, law-abiding people, full of Church theology, and discharging trusts committed to them by the State with fidelity and intelligence—who were born, and have regularly slept all through long lives, in stone beds, which were either contained in the thickness of the walls of their dwellings, or were built out from them as projections, without dreaming that such a fact could ever be held to mark a want of culture or capacity.

I TURN now to a more remarkable form of dwelling, which is still tenanted, but is just passing into complete disuse. Nearly all the specimens of it remaining in Scotland are to be found in The Lewis and Harris or other isl-

ands of the outer Hebrides. There are probably only from twenty to thirty now in occupation, and though some old ones may yet be repaired, it is not likely that a new one will ever again be built. The newest we know of is not yet a century old. It was still occupied in 1866, and was built by the grandfather of a gentleman who died a few years ago in Liverpool.

My first visit to one of these houses was paid in 1866, in the company of Captain Thomas.

They are commonly spoken of as beehive-houses, but their Gaelic name is *bo'h* or *bothan*. They are now only used as temporary residences or sheillings by those who herd the cattle at their summer pasturage; but at a time not very remote they are believed to have been the permanent dwellings of the people. I cannot suit my present purpose better than by telling what Captain Thomas and I saw on the occasion of the visit to which I have referred.

We were obliged to halt for a day at Ken Resort, and we took advantage of the opportunity to visit the garries or sheillings in the neighborhood. We had good guides, and were not long in reaching Larach Tigh Dhubhstail, the summer pasturage of the tenants of Crolista, twelve miles from Loch Roag. As we had been led to expect, we found one of these beehive-houses actually tenanted, and the family happened to be at home. It consisted of three young women. It was Sunday, and they had made their toilet with care at the burn, and had put on their printed calico gowns. None of them could speak English; but they were not illiterate, for one of them was reading a Gaelic Bible. They showed no alarm at our coming, but invited us into the *bo'h*, and hospitably treated us to milk. They were courteously dignified, neither feeling nor affecting to feel embarrassment. There was no evidence of any understanding on their part that we should experience surprise at their surroundings. I

confess, however, to having shown, as well as felt, the effects of the wine of astonishment. I do not think I ever came upon a scene which more surprised me, and I scarcely know where or how to begin my description of it.

By the side of a burn which flowed through a little grassy glen—a sort of oasis in the midst of a great waste of bog and rock—we saw two small round hive-like hillocks, not much higher than a man, joined together, and covered with grass and weeds (Fig. 37). Out of the top of one of them a column of smoke slowly rose, and at its base there was a hole about three feet high and two feet wide, which seemed to lead into the interior of the hillock—its hollowness, and the possibility of its having a human creature within it, being thus suggested. There was no one, however, actually in the *bo'h*, the three girls, when we came in sight, being seated on a knoll by the burn-side; but it was really in the inside of these two green hillocks that they slept, and cooked their food, and carried on their work, and—dwelt, in short.

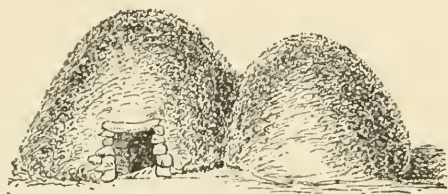


Fig. 37.—Beehive-house (Ceann Resort, Uig, Lewis). See "Proc. of Soc. of Antiq. of Scot.," vol. vii., p. 161.

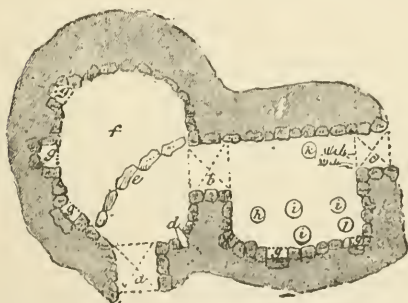


Fig. 38.—Plan of Beehive-house shown in Fig. 37. *a* and *l*, doors; *f*, bed; *d*, fireplace; *g*, presses, etc.

The character of this dwelling will be most readily understood if I first describe its ground-plan (Fig. 38). It consisted of two rooms opening into each other. Though externally the two blocks looked round in their outline, and were in fact

nearly so, internally the one apartment might be described as irregularly round, and the other as irregularly square. The rounder of the two was the larger, and was the dwelling-room. The squarish and smaller one was the store-room for the milk and food. The floor space of this last was about six feet each way. That of the other was about six feet in its shorter and nine feet in its longer diameter. The greatest height of the living-room—in its centre, that is—was scarcely six feet. In no part of the dairy was it possible to stand erect. The door of communication between the two rooms was so small that we could get through it only by creeping. The great thickness of the walls, six to eight feet, gave this door, or passage of communication, the look of a tunnel, and made the creeping through it very real. The creeping was only a little less real in getting through the equally tunnel-like though somewhat wider and loftier passage which led from the open air into the first or dwelling-room.

At the right hand side on entering there was the fireplace. The smoke escaped at a small opening at the apex of the dome. The floor was divided into two spaces by a row of curb-stones eight or ten inches high. These served as seats, the only seats in the house; but they at the same time cut off the part of the floor on which the inmates slept, the bed in short—the whole space behind the row of stones being covered with hay and rushes. In the part of the wall bounding the bed there were three niches or presses, in which, among other things, we observed a hair-comb and some newly-made cheeses. The lids of the little milk-tubs consisted of roughly-made disks of slaty stone, such as the one which I figure on the following page* (Fig. 39).

* I quite recently found this stone on the top of a tin pail in Rob Roy's cottage in Glen Shira. Such stone lids are often found in excavations about brochs and other prehistoric ruins. Most of those so found are small, but

The walls of these beehive-houses are built of rough, undressed stones, gathered from the moor, which are of fair size, but not larger than one or two men could easily lift and put into position. The dome shape, or beehive form, is given by making the successive courses of stone overlap each other, till at length they approach so closely all round as to leave nothing but a small hole, which can be either closed by a large sod or left open for the escape of smoke or the admission of light. I need scarcely say that no ce-



Fig. 39.—Stone Lid, from Argyleshire ($9\frac{1}{2}$ inches in diameter).

ment is used. The principle of the arch is ignored, and the mode of construction is that of the oldest known masonry. Though the stone walls are very thick, they are covered on the outside with turf, which soon becomes grassy, like the

some are larger than that which I figure. I have seen them extensively in actual use—serving as lids to meal-casks, water-pails, pots, sugar-basins, and cream-jars—even in districts where wood was tolerably plentiful. Since finding the one figured, I have obtained two from Unst in Shetland—one of them, which formed the lid of a meal-cask or girnol, is 19 inches in diameter, and the other is $12\frac{3}{4}$ inches.

land round about, and thus secures perfect wind and water tightness.

When we made this visit to Larach, we felt that we had been almost introduced to the stone period without going either to far-off lands or far-off times to find it. We were in a dwelling in the construction of which neither wood, nor iron, nor cement had been used. Stone and turf, and nothing else, had gone to make it. No tool had been needed; scarcely even a wooden spade, and not a hammer of any kind.

My first feeling, as I looked at the house, was that we were in the presence of something of very great age—something which had, to a certain extent, resisted decay, and which had left such vestiges as were easily put into repair by the present people to serve temporarily as a sheilling, just as we might have found a chamber in the walls of the Broch of Mousa occupied as a sheilling. This feeling was strengthened by discovering on the ground near the *bo'h* some fragments of an extremely rude pottery. I did not know then that I should soon see such pottery not only in actual use but in the very process of manufacture, within twenty or thirty miles of the spot where I picked up these fragments. Had this never come to my knowledge I should certainly have been able to show at least one good reason for holding these beehive-houses to be the vestiges of the early man of the islands, but in doing so I should have committed an error common in archæological reasoning, since I should have concluded that the pottery was of necessity very old, because I then knew of none like it, of modern make, in our country.

These houses, however, sometimes present themselves in circumstances which do really point to a great age. One of them, for instance, was found at Nisibost, in Harris, half

buried in sand. It was in ruins, but the walls were in some places six feet high, and the excavation of it disclosed nothing but a quern, some fragments of rude pottery, shells, and the bones of the seal, ox, sheep, deer, and dog.* In another, in South Uist, also half buried in sand, were found a copper needle, deers' horns, a human thigh-bone, the vertebrae of whales flattened and marked with cuts, a bone article eight or nine inches long, flat at each end and round in the middle, another bone implement, a comb, six black stone dishes, and a knife-like implement made of bone.† It thus appears probable that some of the beehive-houses are very old, while others are known to be quite modern.

When I had seen more of them, I came to the same conclusion as Captain Thomas, namely, that they represent an old form of dwelling which is now dying out. No other conclusion, in fact, is possible. The time of the building of some of them has been well ascertained; one, for instance, was built by a person who was alive in 1858, and there are people living who were born in them.‡ They have at one time been very common. Captain Thomas saw fifty or sixty in what he properly calls a limited area. They are not confined to Harris and The Lewis, but I believe are also found in the other islands of the Outer Hebrides, and they probably existed at no very distant time in Skye, in Mull, and in some of the west parishes of the main-land. Not more, however, than from twenty to thirty are now inhabited.

In describing one example, I may be said to have described all, especially as the one I happened to visit possessed many of the features which are common and characteristic. Yet they show varieties, and some of these I

* Captain Thomas, "Proc. of Soc. of Antiq. of Scot.," vol. iii., p. 141.

† Sir Henry Dryden, *op. cit.*, vol. iii., pp. 124, 125.

‡ Captain Thomas, *op. cit.*, vol. iii., pp. 129, 135.

desire now to notice, because they are fraught with instruction.

They do not, for instance, always stand in couples, having a chamber and an antechamber like the one I have described.

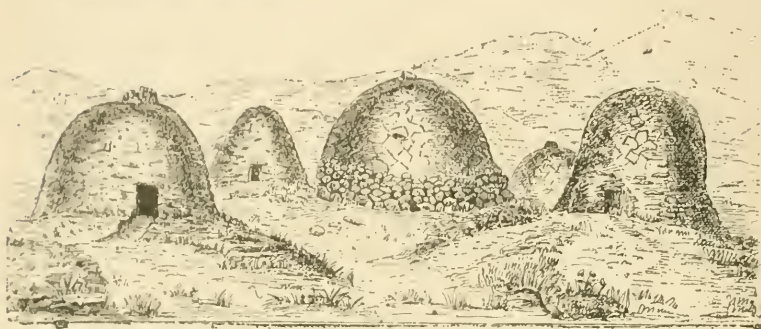


Fig. 40.—Beehive-houses. Fidigidh Iochdrach — Uig, Lewis. (By Captain Thomas.)
Inhabited in 1859.

They often stand as single huts, and there may be several of these in one place (Fig. 40), resembling, as Captain Thomas says, a Hottentot village rather than a hamlet in the British Isles.* On the other hand, instead of a union of two, there may be a union of many, a great agglomeration of beehives, producing a very singular result. A remarkable instance of



Fig. 41.—Group of Beehive-houses. The Sheiling of the Garry of Aird Mhor, Uig, Lewis. (By Captain Thomas.)

this occurs at Gearraidh na h' Aird Mhor. It has several entrances, and would accommodate many families, who might

* Captain Thomas, *op. cit.*, vol. iii., p. 137.

be spoken of as living in one mound rather than under one roof. A restored drawing and also a plan of this are given in Figs. 41 and 42, the restoration being on the line C D of

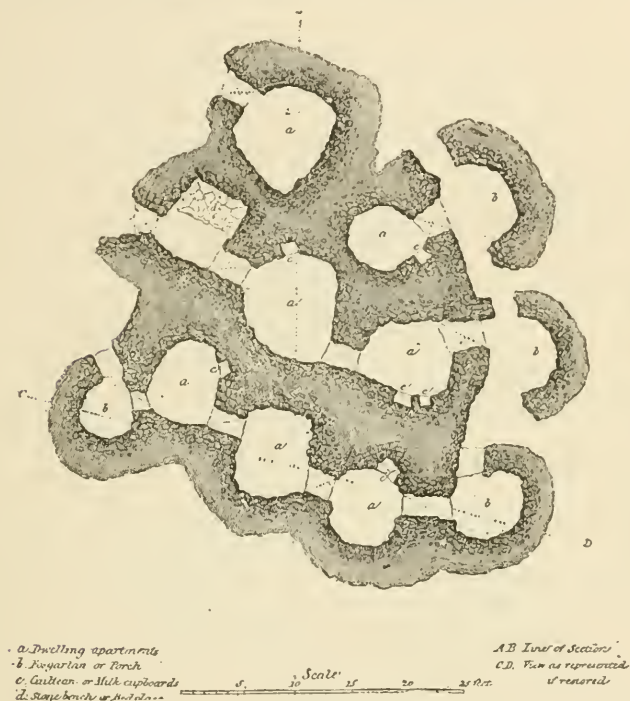


Fig. 42.—Plan of the group of Beehive-houses at Garry of Aird Mhor, Uig, Lewis (By Captain Thomas.) Fig. 41 shows a restoration on the line C D.

the plan. In 1823 it was inhabited by four families, and the present tenant (1860) of Aird Bheag, an old man, lived in it when a boy for eight successive summers.*

Again, there are sometimes two door-ways. It is thought that this is a late feature, and that its object was to make "the fire draw," by rendering it always possible to close the door to windward. The plan of a *bo'k* at Loch an Ath Ruadh shows this character (Fig. 43).

* Captain Thomas, *op. cit.*, vol. iii., p. 139.

SEVERAL of the beehive-houses which are now in ruins have a sleeping-place in the thickness of the wall. I

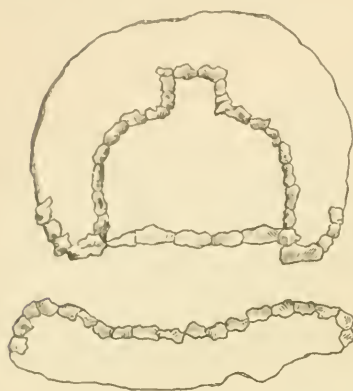


Fig. 43.—Plan of Beehive-house on west side of Loch an Ath Ruadh. (By Captain Thomas.)

have already alluded to this as an occasional feature of some of the older black houses which are still occupied. But there is a modification of the wall-bed to which I have for a moment to draw attention. It occurs in Bo'h Staeseal, between Stornoway and Carloway, of which a plan and section are given in Fig. 44.* This *bo'h* is formed of three alcoves, or recesses

(*f*, *g*, and *h* of plan), radiating from a central beehive-chamber (*c* of plan), with a porch (*e* of plan), having two doors (*a* and *b*), between which the fireplace is situated. The three recesses are the dormitories. That which constitutes the peculiarity of the wall-bed in this case is that it does not run lengthways with the wall, but goes right into it, end first, or rather goes right through it and projects beyond.

Everything which is known leads to the conclusion that this is an old form of the beehive-house. In external appearance, however, when covered with turf, it only differs from the ordinary beehive-house in seeming flatter and in covering a greater area; but there is a considerable difference in the internal arrangements, these being altogether of a more complex and finished character.

The ruins of a still older, still more complex, and still more highly finished beehive-house are to be seen at Meall

* Captain Thomas, *op. cit.*, vol. vii., p. 164.

na Uamh, in South Uist.* It is a house of greater size and pretence than any I have yet noticed. Fig. 45 shows its plan. Its interior is round, and it is no less than 28 feet in diameter. Within this area there are ten piers or pillars, formed of blocks of dry stone masonry. These pillars are about four feet high, four to six feet long, and one and a half to two feet thick. They radiate from the centre, where they leave a clear space about 15 feet in diameter, and they reach

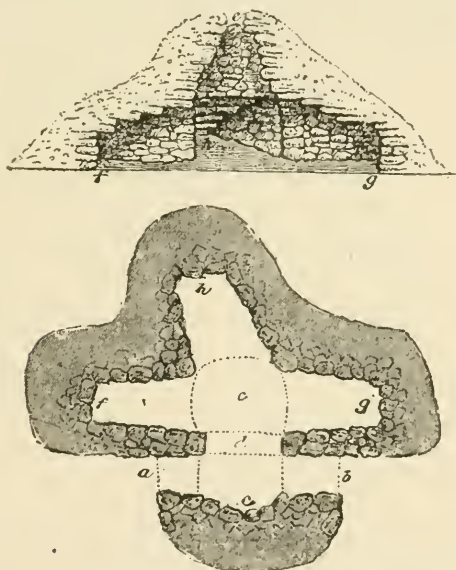


Fig. 44.—Section and plan of Bo'h, Staeseal, Lewis. (*a* and *b*, door-ways; *c*, fireplace; *f*, *g*, and *h*, bedplaces; *e*, dome). (By Captain Thomas).

to within a couple of feet of the boundary wall. It is thus possible to walk round the outside of them—that is, there is a circular space or ring between the outer wall of the building and this circle of piers. The chief use of the piers is to reduce the space to be covered by the overlapping stones of which the dome is constructed. In point of fact, they change

* Captain Thomas, *op. cit.*, vol. vii., p. 165.

the span of 28 feet into one of 15 feet. A single stone connects the outer ends of each pair of piers—the space being reduced by a little overlapping of the last course. The distal end of the piers is connected with the main wall, at a height of about four feet, by a single stone in the same way.

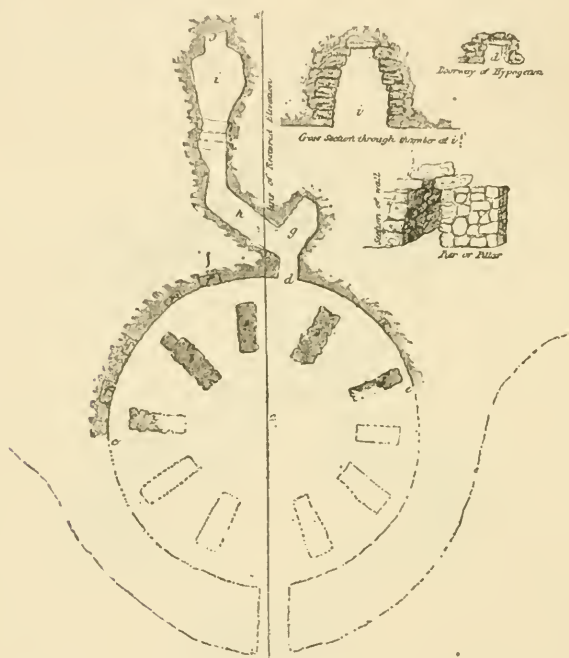


Fig. 45.—Beehive-house, with Hypogeum (*g, h, i*). South Uist. (By Captain Thomas.)

From the inner end of the piers a large dome rises, covering the intervening central space. The stones are entirely undressed, and of every possible shape and size. There is no evidence of the use of any tool by the builders. No stone shows that it received its shape from the hands of man.

This beehive-house, a restored elevation of which is shown in Fig. 46, would accommodate from forty to fifty people. It has attached to it a subterranean gallery, or hypogeum (*g, h, i* of plan), to which access is given by a very small

door. This gallery is fourteen feet long, and terminates in an underground beehive-chamber of considerable size (*i* of plan).

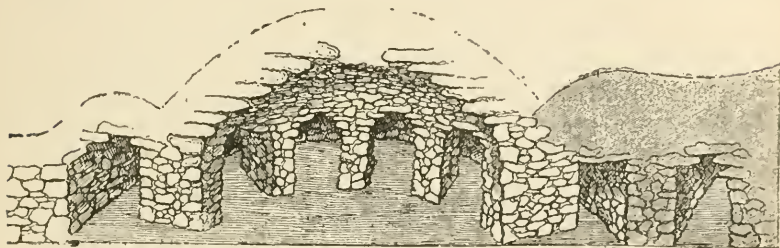


Fig. 46.—Restored elevation, on line *a a* of plan, of Beehive-house at Meall na Uamh, Huishinish, South Uist. (By Captain Thomas.)

The building which I have just described exhibits the same architectural style and knowledge as the simpler beehive-houses which have been noticed. But it is vastly more pretentious—altogether a larger conception, and designed for a larger purpose. It is a handsome building, and involves much clever planning. It may have been the palace or the reception-hall of an ancient chief. Its great size, its dome, its pillars, arches, and corridors mark it as fit for such a purpose. But, whoever used it, its builder and designer was a man of no mean mental power. It is true he used no cement, he appears to have been ignorant of the principle of the arch, and he employed no tools to shape his stones; yet, for all this, he was beyond question a man of ingenuity, large ideas, and good taste. Can any one assert that he may not have been potentially equal to the builder and designer of the “extremely beautiful circular church,” or baptistery, at Nocera dei Pagani, on the road between Rome and Naples, which is so greatly admired, and which is very much on the same plan? May not the same question be fairly asked if we substitute for the church of Nocera dei Pagani the tomb of Constantia, now known as the Baptistery of St. Agnese? This may seem to be pushing my views to an extreme; but the more the facts are studied,

the more I believe it will be felt that such questions properly arise, and that there is more than a possibility of their being justified by the answers, if we could get them.

The handsome beehive-building which I have just described is nevertheless believed to be older than any of which I have spoken. In other words, as this kind of dwelling passed out of use, it appears to have undergone a degradation or debasement. We happen to possess the proof of this, but it is only what we should have expected. If it is unlikely that we shall ever again have one of these

simple beehive-houses built in Scotland, it is infinitely more unlikely that we shall ever have one of the size and complicated design of that at Meall na Uamh. Captain Thomas, when he wrote of these houses, made the remark that "the simplest form is also the most modern;"* that the very earliest form was probably as simple, but that "as the requirements of that early state of society became more exigent, a much more

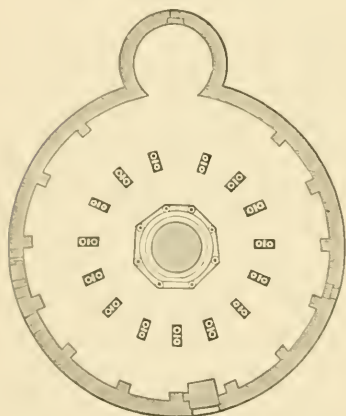


Fig. 47. — Plan of Baptistery at Nocera dei Pagani. Scale 50 feet to 1 inch. By permission, from Fergusson's "History of Architecture," vol. i., p. 385. Lond., 1865.

complex arrangement and greater size was used: and as the primitive modes of life are about to be entirely supplanted, the summer sheilling of the Uig peasant has returned to its former insignificance."† These are the words of Captain Thomas. He saw the facts, and recorded them with the right interpretation. He did this without thought of the lesson which I have been endeavoring to make the

* Captain Thomas, *op. cit.*, vol. vii., p. 179.

† *Ibid.* vol. vii., p. 179.

facts teach—without thought of that law which has such important bearings on the study and interpretation of those vestiges from which we try to read the story of prehistoric man.

In another part of his paper Captain Thomas quotes from Dr. Daniel Wilson the remark that “it is curious that, as civilization progressed, primitive architecture became not only simpler but meaner,” and Captain Thomas adds that there is sufficient evidence in the beehive-houses “of this descending progression.”* I can only welcome sentiments of this kind, which fit so well into the way which I take of looking at such matters.

The meanest of all beehive-houses is that which men construct at this very day, to give up-putting or shelter not to men but to pigs and poultry. Such structures I have seen in the parish of Evie in Orkney, and they may be met with in other parts of that county, and also in Caithness. I have seen many, and have many sketches of them. I first came across them clustered about the strange deserted religious buildings on Einhallow—a little island in the tempestuous Orkney seas, which has never yet been properly studied, and which some day may prove to be a sort of northern Iona. Till recently these old buildings were turned to some account as ordinary dwellings. When I visited them, however, no one lived on the island, and I thought that these little solid beehive structures might prove an important antiquarian discovery. A better knowledge of the main-land taught me that they were nothing but the pigsties of the people whom typhus had driven from the sacred island a year or two before my visit. Indeed, I had scarcely landed from Einhallow when, at Evie, on the main-land, I saw one of these structures tenanted by a pig, and learned that it had been built about ten years before.

* Captain Thomas, *op. cit.*, vol. vii., p. 183.

I leave this subject with the remark that the beehive-house certainly belongs to the man without a story, though the man with a story is found still clinging to it. It becomes thus a prolongation of the prehistoric into the historic, forcing us to realize what we well know, though we have dropped into a fashion of speaking and almost thinking otherwise, that even for a so-called "old country" like ours there is but a short road through the historic to the prehistoric, and that phrases like "immense antiquity" and "enormous age" are sometimes made use of in reference to things to which they have no well-ascertained applicability.

LECTURE IV.

(25TH APRIL, 1876.)

CAVE LIFE.—CAIRNS.—RIVLINS.—THE SCYTHE.—THE ONE-STILTED
 PLOUGH.—THE CASCHROM.—WHEELLESS CARTS.—BUTTONS.—
 STONE COFFINS.—THE CRUSIE AND TINDER-BOX.—BROOCHES.—
 THE BISMAR.

LABOR, time, and skill are expended on the erection of beehive-houses, but there are dwellings which their occupants choose because they are ready-made, and I have now to speak of these; that is, of the extent to which cave life may still be seen in Scotland.

In August, 1866, along with two friends,* I visited the great cave at the south side of Wick Bay. It was nine at night, and getting dark when we reached it. It is situated in a cliff, and its mouth is close to the sea. Very high tides, especially with north-east winds, reach the entrance, and force the occupants to seek safety in the back part of the cave, which is at a somewhat higher level than its mouth.

We found twenty-four inmates—men, women, and children—belonging to four families, the heads of which were all there. They had retired to rest for the night a short time before our arrival, but their fires were still smouldering. They received us civilly, perhaps with more than mere civility, after a judicious distribution of pence and

* Mr. Malcolm McLennan and Mr. Joseph Anderson.

tobacco. To our great relief, the dogs, which were numerous and vicious, seemed to understand that we were made welcome.

The beds on which we found these people lying consisted of straw, grass, and brackens, spread upon the rock or shingle, and each was supplied with one or two dirty, ragged blankets or pieces of matting. Two of the beds were near the peat fires, which were still burning, but the others were farther back in the cave, where they were better sheltered.

On the bed nearest the entrance lay a man and his wife, both absolutely naked, and two little children in the same state. On the next bed lay another couple, an infant, and one or two older children. Then came a bed with a bundle of children, whom I did not count. A youngish man and his wife, not quite naked, and some children, occupied the fourth bed, while the fifth from the mouth of the cave was in possession of the remaining couple and two of their children, one of whom was on the spot of its birth. Far back in the cave—up-stairs in the garret, as they facetiously called it—were three or four biggish boys, who were undressed, but had not lain down. One of them, moving about with a flickering light in his hand, contributed greatly to the weirdness of the scene.

Besides the child spoken of, we were told of another birth in the cave, and we heard also of a recent death there, that of a little child from typhus. The Procurator-Fiscal saw this dead child lying naked on a large flat stone. Its father lay beside it in the delirium of typhus when death paid this visit to an abode with no door to knock at.

Both men and women, naked to their waists, sat up in their lairs and talked with us, and showed no sense of shame. One of the men summoned the candle-boy from the garret, in order that we might see better, and his wife trimmed the dying fire, and then, after lighting her pipe, proceeded to suckle her child.

In the afternoon of the next day, with another friend,* I paid a second visit to this cave, when we found eighteen inmates, most of whom were at an early supper, consisting of porridge and treacle, apparently well cooked and clean.

One of the women was busy baking. She mixed the oat-meal and water in a tin dish, spread the cake out on a flat stone which served her for a table, and, placing the cake against another stone,† toasted it at the open fire of turf and wood. This was one of three fires, all situated about the centre of the wider part or mouth of the cave, each with a group about it of women and ragged children.

There was no table, or chair, or stool to be seen, stones being so arranged as to serve all these purposes. There was no sort of building about the entrance of the cave to give shelter from the winds, which must often blow fiercely into it. Yet this cave is occupied both in summer and winter by a varying number of families, one or two of them being almost constant tenants.

I believe I am correct in saying that there is no parallel illustration of modern cave life in Scotland. The nearest approach to it, perhaps, is in the cave on the opposite or north side of the same bay. Both of these caves I have had frequent opportunities of visiting, and I have always found them peopled. Only occasional use is made of the other caves on the Caithness and Sutherland coasts. Of these, perhaps, the cave at Ham, in Dunnet parish, is the most frequented. It is the nearness to a large town which gives to the Wick caves their steady tenants. The neighboring population is large enough to afford scope for trading, begging, and stealing—all the year round.

* Sheriff Russell.

† Not long ago it was customary in some parts of Scotland, in Forfarshire and Kincardineshire, for instance, to toast the oatcakes before the open fire on stones specially made for the purpose. Some of these are figured in the Appendix.

The occupants of the Wick caves are the people commonly known by the name of tinkers. They are so called because they work chiefly in tinned iron. The men cut, hammer, and shape, while the women do the soldering. But they also make horn spoons, *coup* horses, tell fortunes, and beg or steal. One or two of them are known to have saved a little money; and all of them are believed to pass more money through their hands than do thousands of those who live in a far less degraded state.

When they do not occupy these caves they live under canvas, and miserable things their tents are. They are nothing, indeed, but pieces of blanketing or canvas spread over bent sticks, which have their two ends fixed in the ground; and they are not above four feet high, so that their occupants require to creep into them. Indeed, they are little more than low coverings of the rudest construction erected over the beds of their tenants, who cannot be said to dwell in them; they do nothing but sleep in them and use them as a shelter when the rain is heavy. They sit, and eat, and work in the open air, so that the tent life of tinkers is not much in advance of their cave life, and neither life is much ahead of that of the most degraded savage. House life they have none. Such caves and tents as I have described constitute their only dwellings.

The tinkers of the Wick caves are a mixed breed. There is no gypsy blood in them. I make this assertion with confidence, having repeatedly visited Yetholm, and other places where gypsies are to be found, to enable me to form an opinion on the point. Some of them claim a West Island origin; others say they are true Caithness men; and others again look for their ancestors among the Southern Scotch. The parents of one woman were correctly said to be Irish, for her tongue betrayed her origin. Light and red hair, blue eyes, and a white freckled skin were common among them. They were not strongly built, nor had they a look

of vigorous bodily health. Their heads and faces were usually bad in form. Not a few of the heads reminded me of those so often seen among persons who have been convicted of petty crime; and as regards their faces, broken noses and scars were a common disfigurement, and a revelation, at the same time, of the brutality of their lives; yet some among them might be called good-looking. One girl might have been painted for a rustie beauty of the Norse type, and there was a boy among them with an excellent head. It is possible that one or both of these may yet leave their parents, from dissatisfaction with the life they lead. This we might expect; but it has been actually ascertained that those who are deserters from this wretched wandering life are always the intelligent, the pleasant-looking, and the able-bodied. They are tempted to desert by the feeling that they have it in them to reach the greater comforts which they see so many enjoying in the community from which they are practically separated.

These people, however, are not, in any sense, a race; they are only the dregs of a race—persons who have dropped out of the line of march. Nothing reveals this more clearly than an examination of the recruits which they must receive to prevent their dying out. This examination I have made over and over again, and I have always found the recruits to be of a low type—poor creatures, morally, intellectually, and physically. These cave people, in short, are a counterpart of the population of our city closes. If they were transported to Edinburgh or Glasgow, they would naturally and necessarily find their homes in its slums. They are not, however, one whit more degraded than the people who actually inhabit these slums, and whose houses are built of stone and lime, though we are able to say of them that they live in caves, where children are born, brought up, and die; that they sit before strangers almost in nakedness, without feeling or showing a sense of shame; that virtue and

chastity exist feebly among them, and honor and truth more feebly still; that they neither read nor write; that they go to no church, and have scarcely any sort of religious belief or worship; and that they know little or nothing of their history beyond what can be referred to personal recollection.

I might almost write this last sentence as a description of the Bushmen of Australia or the savages of the Andaman Islands. But if I did so, and asserted that the same words do really describe both the cave people of Wick and these savages more accurately than we like to admit, I should probably be reminded of one important difference, namely, that the tinkers are workers in iron, while the savages belong to the stone age and know nothing of the metals. I should answer this with a question, and ask what reasons exist for thinking that the manufacture of a tin kettle involves a greater effort of intellect or skill than the manufacture of a flint arrow-head? Is it correct to regard the maker of our elegantly-shaped and highly-finished flint arrow-heads and celts as less of a skilled workman or less of an artist than the maker of tin pails and pannikins? It is true, the first picks up a stone and out of it fashions the tool or weapon he wants; while the latter makes his pails out of one metal coated with another metal, on the preparation of which much knowledge has been expended. But it was not expended by him; and, when he goes to a shop and buys his sheets of tinned iron, he picks them up in as full a sense as the stone-age man picks up his flint nodule. In a fuller sense, I should rather say; for we know that the stone-age man mined for his nodules in order to reach the strata in which those lay which best suited his purpose: while the tinker of the Wick caves takes his sheets of metal from the merchant without a question or a thought about where they came from or how they were prepared. If we had the men

here who made our old flint arrow-heads, can any one doubt their ability to learn arts greatly more difficult than the art of working in tinned iron? It is by no means so certain, on the other hand, that we should succeed in finding men among the Wick tinkers who could be trained into skilled workers in flint.

I FOUND no sculptures in the Wick caves, not even a rude figure or letter cut for amusement in an idle hour. Perhaps this is accounted for by the fact that the rock is very hard and ill-suited for carving; but to some extent it certainly has its origin in the degraded, feeble, and ignorant condition of the occupants. Nor did I find any refuse-heap in the caves or near them—a fact which I could only explain by the proximity of the sea. If the people ceased to inhabit these caves, they would leave absolutely nothing to show what their mode of life had been. Even the tin clippings, which are in abundance among the loose stones, would disappear by corrosion long before the lapse of half a century.

I do not now ask what information we possess to enable us to institute a comparison between the present cave people of Caithness and those who dwelt in the caves of the Dordogne, when the mammoth and reindeer existed in France, or those who inhabited Kent's Hole or the caves of Brixham when the bear and the hyena were among the wild animals of England. On this subject I shall have occasion to speak in a future course of lectures, and I think it must be plain to all that what has been now said of the cave life at Wick may then be helpful in drawing conclusions which are fair and sound. It can scarcely fail to be so, if I am correct in thinking that it shows us:

1. That though a certain portion of a people are found

to live in caves, it does not follow that the whole, or even a large part of that people, do so.

2. That there may be an occasional, as well as a continuous, living in caves, and that the people who live in them occasionally may have other dwellings.

3. That the cave dwellers of a nation may exhibit a degree of degradation which may not be exhibited by the nation of which they form a part. In other words, that cave dwelling in a country may represent something abnormal or exceptional as regards that country and its people. If this be true in our time, it may have been true in past times.

4. That working in metals does not of itself necessarily imply a greater mental power, or greater culture, than working in stone.

5. That in all nations or races, and most clearly in those nations on which the civilizing forces are operating strongly, there is a sedimentary class, formed of and recruited from those who are incapable of holding a high place. Such persons are uncultured because they are incapable of receiving culture.

This class presents itself, though in a manner less marked, in nations or races which have made little progress. Flocks of the coarsest breed of sheep produce shotts, and so do the lowest races of men. Even where the tree of culture is low, and where those who reach the very top have but a short climb, there will be weaklings at the foot who cannot climb at all. In every state of society or degree of civilization this happens, though it is certainly most apparent in states of high civilization and culture.

THERE is, perhaps, nothing of man's work in Scotland which we deem older than our cairns.

We commonly think of them as mere heaps of stones, but recent explorations show them to be frequently con-

structed on definite and very curious plans. We should have known more of this if the same intelligence had guided the exploration of cairns generally as directed the exploration of the cairns of Caithness. The work which a few years ago was done there by Mr. Joseph Anderson, and which I had opportunities of watching as it proceeded, has greatly raised the dignity of cairns, and has made us realize that they were certainly not always the work of a poor and feeble people, nor even of a thin population. One of the Caithness cairns is 240 feet long and 70 feet wide, and many cairns are of great size. Such memorial structures show health and power both in the intellectual and in the moral nature of those who built them. Neither in conception and purpose, nor in execution, are they insignificant or poor. It does not affect this conclusion that no stone of them is fashioned into shape by any tool, and that inscriptions are wanting on them. This merely discloses an absence of our culture in their builders, not the absence of an ability to receive it. Many of our cairns were built by people in their stone age; but they nevertheless reveal in their builders both intellectual capacity and correct sentiments. No one, I think, who fairly studies their grandeur, multitude, and purpose, can come to any other conclusion. I make these general remarks about cairns in order that some things regarding them, which I am about to state, may be better understood.

Cairns, as I have said, are not always mere heaps of stones thrown together at random. Many of them, on the contrary, are distinct structures, "with a regular ground-plan, and a well-defined exterior and interior elevation."* This is true of all the chambered cairns. They differ in their pattern and vary in their details, but the leading features of architectural construction are constant. The chamber occupies the body of the cairn, and has regularly-built walls,

* "Proc. of Soc. of Antiq. of Scot.," vol. xii., p. 342.

and a roof rudely arched by overlapping stones. "A long passage leads from the chamber to the exterior of the cairn. This passage is lintelled over with large slabs. A bounding or retaining wall—sometimes single, at other times double—runs round the whole circumference of the cairn, giving it the character of a structure with external and internal elevations, and a ground-plan defined by these constructions."*

The cairns of greatest magnitude and most complicated structure are probably those which have been examined and studied in Caithness. Of two of these ground-plans are shown in Figs. 48 and 49.

So far as is yet known, cairns of this pattern are confined to Caithness, though it is possible that further research may show that they occur also in other parts of the country. It is probable, indeed, that the long cairns examined in Strathnaver would have been found to be of the same pattern, if their structure had been fully made out.† At the same time, it may

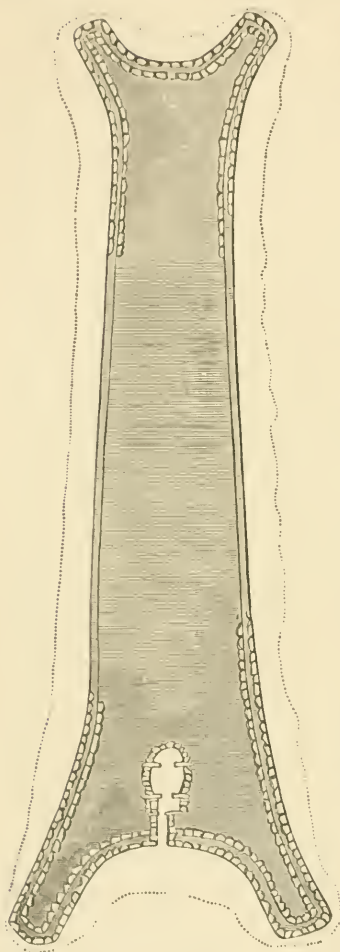


Fig. 48.—Plan of chambered and horned long Cairn at Yathouse, Thrumster, in Caithness-shire. Greatest length 190 feet; greatest breadth 45 feet.—"Proc. of Soc. of Antiq. of Scot.," vol. vii., p. 483.

* "Proc. of Soc. of Antiq. of Scot.," vol. xii., p. 446.

† Ibid., vol. x., pp. 521–22.

yet be found that the cairns of different districts possess distinctive architectural characters.

The simple circular chambered cairn is more widely distributed, but not less interesting and scarcely less definite in

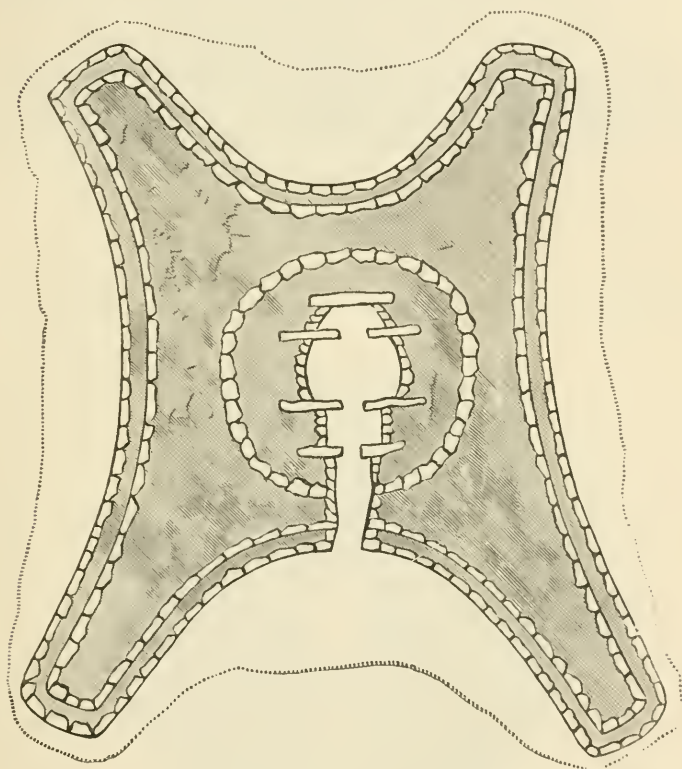


Fig. 49.—Plan of chambered and horned short Cairn at Ormiegill, near Ullster, Caithness-shire. Extreme length 66 feet, and extreme breadth nearly the same.—“*Proc. of Soc. of Antiq. of Scot.*,” vol. vii., p. 488.

its structural features. A section and ground-plan of one of these are given in Figs. 50 and 51.

At Achmacree, in Argyleshire,* Dr. Angus Smith found one of these circular chambered cairns, and the famous ruins

* “*Proc. of Soc. of Antiq. of Scot.*,” vol. ix., p. 409.

at Clava, in Inverness-shire, which are represented in Fig. 52, furnish another example. There is every reason to believe

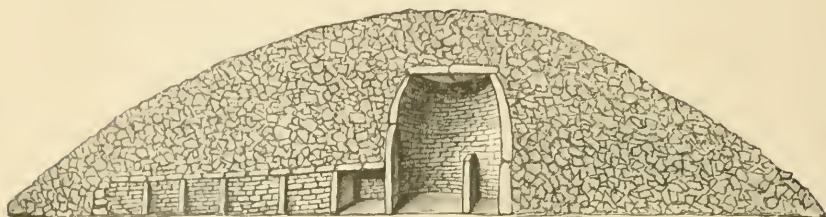


Fig. 50.—Section of the chambered round Cairn at Camster, Caithness, showing passage 20 feet long and chamber 10 feet high. From a plan by Mr. Anderson. See "Proc. of Soc. of Antiq. of Scot.," vol. vii., pp. 495-96.

that we shall soon have additional instances of the circular chambered cairn, as it is now known that cairns, when exam-

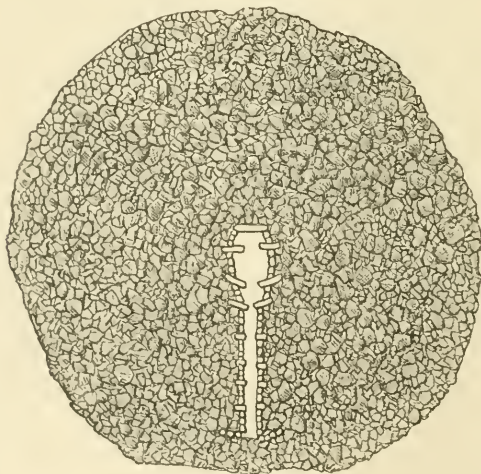


Fig. 51.—Ground-plan of chambered round Cairn at Camster, Caithness, 75 feet in diameter.

ined, should not be thoughtlessly torn to pieces or levelled on the supposition that they are always mere heaps of stones.

The circular cairn near Corriemoney, in Glen Urquhart, which has not yet been fully explored, shows a definite plan, being bounded by two circles of earth-fast stones. A ground-



Fig. 52. — Cairn at Clava, Inverness-shire, from a drawing by the Rev. Dr. Joass.—
 "Proc. of Soc. of Antiq. of Scot.," vol. xli., p. 348.

plan of it is given in Fig. 53. This cairn has another feature of interest, which presents itself also in the case of the cairn at Clava. On one of the standing stones, on the north-west side of the circle, there occur the cup-markings which Sir James Simpson described in his work on *Archaic Sculptures* (Edin., 1867). On another stone lying loosely on the top of the cairn, but known to be out of its proper position, the same cup-markings also occur. These two stones are shown in Figs. 54 and 55.

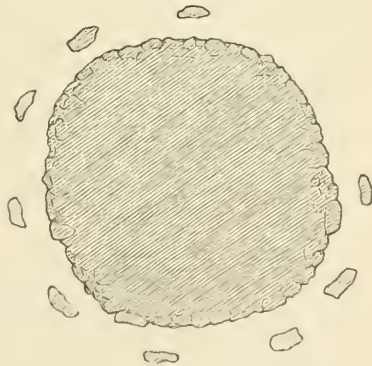


Fig. 53.—Plan of Circular Cairn at Corrie-mony, in Glen Urquhart, Inverness-shire. The Cairn is about 60 feet in diameter and about 11 feet in height. See "Proc. of Soc. of Antiq. of Scot.," vol. x., p. 644.

Another illustration of design in the construction of a cairn occurs at Inverladnan, in Strathspey, and is shown in Fig. 56, which roughly represents the ground-plan.* This

* "Proc. of Soc. of Antiq. of Scot.," vol. x., p. 684.

cairn is simpler than the circular chambered cairn, since, instead of a chamber with a passage leading to it, it contains



Fig. 54.—Standing Stone with cup-markings at Corriemony, in Glen Urquhart, Inverness-shire; 4 feet 7 inches high, 2 feet 4 inches broad, and 7 inches thick.

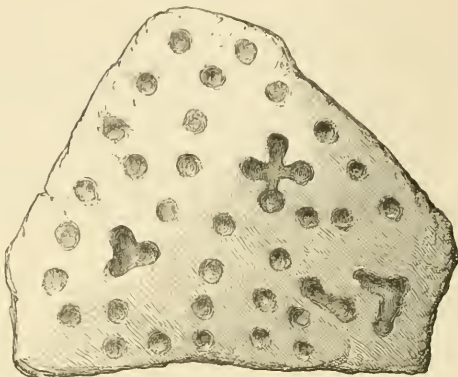


Fig. 55.—Slab with cup-markings at Corriemony, in Glen Urquhart, Inverness-shire; 8 feet long, 4 feet broad, and 16 inches thick.—“*Proc. of Soc. of Antiq. of Scot.*,” vol. x, p. 644.

only a short cist, in which human remains were found. It does not follow, however, from its greater simplicity and smaller

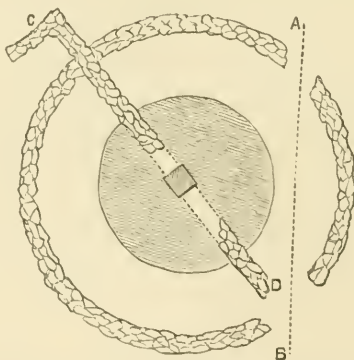
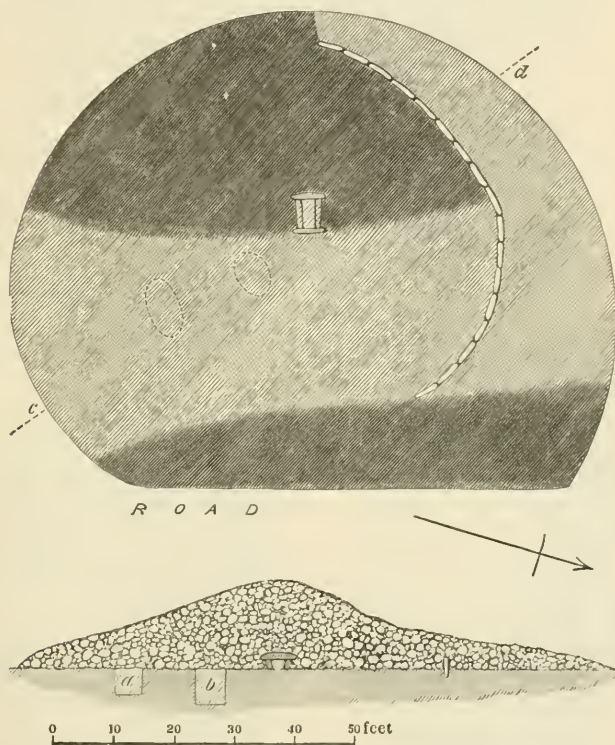


Fig. 56.—Plan of small Cairn over a short cist at Inverladnan, in Strathspey, surrounded and traversed by a low flat line of loose stones somewhat resembling a paved way. The dotted line A B shows the position of a wire fence, during the erection of which the cairn was destroyed.

size, that it was the work of a more ancient and ruder people. A cairn of the bronze age may show still lower architect-

ural features, and may be almost correctly described as a mere heap of stones erected over one or more graves. Of this we have an illustration in the sepulchral cairn at Collessie, a ground-plan and section of which are given in Figs. 57 and 58. The exploration of this cairn yielded the bronze dagger-blade, and the gold fillet to encircle its handle, which



Figs. 57, 58.—Plan, and section on *c*, *d*, of Bronze-age Cairn at Collessie.—“Proc. of Soc. of Antiq. of Scot.,” vol. xii., p. 441.

are represented in Figs. 59 and 60. It yielded also the two urns shown in Figs. 61 and 62.

Mr. Anderson, in describing this cairn,* says it “is structureless. It has nothing of the nature of a wall, external or

* “Proc. of Soc. of Antiq. of Scot.,” vol. xii., p. 446.

internal; and thus, for aught that it shows to the contrary, the people who reared it might have been destitute of the constructive ability to erect a wall, and yet they were in

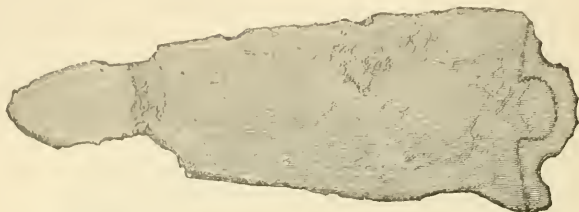


Fig. 59.—Bronze Dagger-blade found in the cairn at Collessie, Fifehire.

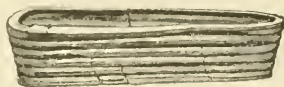


Fig. 60.—Gold Fillet which had encircled the handle of Dagger (Fig. 59).



Fig. 61.—Urn found in central cist of cairn at Collessie; 9 inches in height.

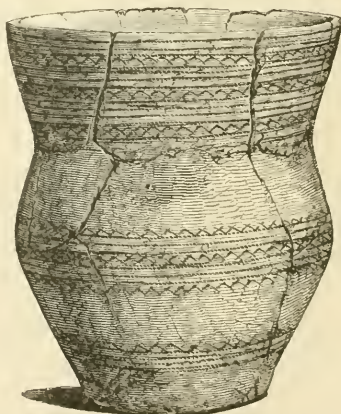


Fig. 62.—Urn found six feet under the base of the cairn at Collessie; 7 inches in height.

their bronze age, while the people of Caitlness, who constructed chambered cairns, were in their stone age. I do not infer from this, however," he goes on to say, "that these

men of the bronze age in Fife were inferior in constructive capacity to the men of the stone age in the north of Scotland. But the facts have a very important bearing on the theory of the relative age of the two classes of cairns. They show that the rude, structureless cairn, enclosing a simple cist of slabs, is not on that account necessarily older than the elaborately constructed chambered cairns. They show us that the less advanced structure may be characteristic of the more advanced civilization; and hence we are taught that we should have erred completely if we had attempted to measure the relative civilization of these two peoples by simply comparing the indications of constructive ability they have exhibited in the erection of their cairns." These views are so much in harmony with those I have long endeavored to teach, that I gladly quote them.

There are cairns which we know to be even later than those of the bronze age, and we find these still simpler and ruder. I cannot tell what kind or size of cairn was erected in the presence of St. Columba over the grave of the decrepit chief of the Geona cohort by his companions who brought him to Skye to be baptized, but it must, I think, have been structureless; and the same appears to have been true of the small cairn which is, or lately was, in the churchyard of Penmachno, in Wales, over the Christian Carausius—the pillar-stone in connection with the cairn bearing the Christian monogram of the *chrism*, and having inscribed on it, in bad Latin, the words CARAVSIUS HIC JACT IN HOC CONGERIES LAPIDUM.

But though I can say little of the character of the early Christian cairns, I am able to speak definitely of some which are late, for the practice of building cairns in memory of the dead survives in Scotland. Indeed, it may still be called a common practice in certain parts of the north-west main-land. The place of interment in these districts is often very far from the place of dwelling, and as the coffin is

carried by men and not by horses, a halt is generally made on the way to the grave, so that the bearers may rest and refresh themselves. Where the rest is taken a small cairn is erected, generally about four or five feet high, and three or four feet wide at the base. On the way from certain districts to the church-yard there are some favorite halting-places, and at such places many of these small cairns will of course be found. I have seen several of these favored spots, and one of them, situated in a birch wood a few miles

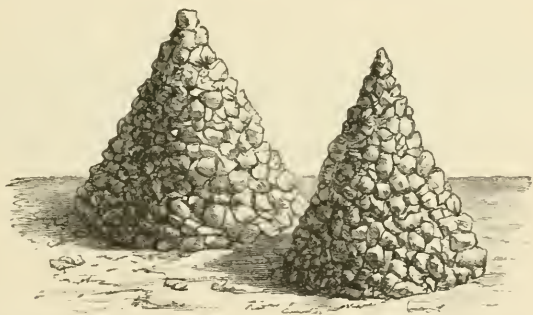


Fig. 63.—Group of Modern Cairns near Torgyle Inn, Inverness-shire.

from Torgyle Inn, is represented in the above woodcut (Fig. 63) from a sketch I took in 1864.

When a distinguished person is being carried to the grave, then the cairn is sometimes large and carefully constructed. There are two such cairns on the roadside not many miles from Fort William, both of considerable size and pretension, which mark the halting-place of the funeral processions of two gentlemen who were well known and highly esteemed (Figs. 64 and 65). I saw these also in 1864, and made the sketches from which the woodcuts are taken.

It is not possible to regard the practice now described as anything but a survival of the true monumental and sepulchral cairn-building. In this light alone it is extremely interesting. But it also suggests a speculation as to whether some of the simpler and unchambered cairns, which have hitherto been always regarded as of great age, may not be much more modern than has been generally supposed. A cairn three or four times the size of that shown in Fig. 64 would be an imposing and enduring structure; and there would be nothing about it to show that it was built in the late iron age. We should not even find the name of the person in whose honor it was erected attached to it by any



Figs. 64, 65.—Modern Cairns on the roadside not far from Fort William.

sort of inscription. A century hence that name, though it is now well known to the people, will almost to a certainty be forgotten. Cairns of considerable size, undoubtedly modern, and forming part of a group many of which are known to be literally of yesterday, no doubt carried names with them on the public tongue of a generation back; but these names are already completely lost. In archæological studies we are too apt to forget the work which a single century is capable of accomplishing. Indeed, it sometimes seems as if we derived gratification from referring an object or practice to an enormously remote period; and we are thus tempted to form hasty conclusions, and to be content with evidence which

would not satisfy any jury of scientific men. But the love of the sensational ought to be a feeling altogether unknown to the searcher after truth. Where hundreds or tens of hundreds of years are sufficient, why should we desire tens of thousands or millions?

May we not fairly infer, from what has been said about cairns,

1. That we have no grounds for holding it impossible that some of our great cairns of complex structure are of as late a period as the beehive-houses, which certain of them resemble, in so far at least as regards the structure of the contained chamber. The fact that we have no knowledge of the late erection of any such cairn is no proof that all of them must be of vast antiquity. Till quite recently we did not know even of the existence of beehive-houses in our country, much less of their being lately built and still occupied.

2. That the cairn of to-day is nothing but an utterly mean edition of the grand cairn of former times. In other words, that as cairn-building dies out it appears to do so by a process of debasement, the practice being represented in its last struggle for existence by the pitifully poor little heaps of stones to which a Highlander now refers, when, feeling sure of surviving you, he cheerily promises to mark his respect by adding a stone to your cairn.

I ONCE met a funeral procession, and soon after I saw the little cairn which had been built while it halted, and added my stone to it. One of the men who carried the coffin wore shoes made of the hide of the ox, untanned, and with the hair still on it. Such shoes are known as *riurlins*, and are described in books of costume as "the shoes of the ancient Briton." This sounds well, and I find no fault with it. They are so described correctly, and they have properly

a place in collections of antiquities. There is probably no older or ruder form of shoe known. It appears in the tombs of Egypt, and it is inferior in design and execution to the moccasin of the North American Indian; yet it happens that there are thousands of people in Scotland who wear this shoe at this hour. It is in most common use in Shetland, but it is also frequently to be seen in the Orkney and Hebridian islands. I had a pair made for myself in Lerwick, and one of these is shown in Fig. 66. At Sand, a village quite near Lerwick, I have met a score of women all wearing them; but they are to be seen all over the Shetland Islands. I am certainly within the mark when I say



Fig. 66.—Rivlin from Shetland.

that thousands of pairs could at this moment be purchased in that single county.

The rivlin is nothing but a piece of untanned hide folded, when fresh or moistened, up the sides of the foot and over the toes, stitched or closed at the heel and toes with a piece of twine or a thong of the hide, and then secured to the foot more or less like a sandal.

Old people are content with any hide, whatever the color of it be; but young women, and occasionally young men, choose a hide which is spotted—white and red or white and black. The gayest pairs, however, are as rude in idea and construction as the dullest.

It was to the use of these shoes that John Elder referred in his famous letters to Henry VIII. of England (in 1542-43), when he wished to show the extent of the barbarism

of the "Wilde Scots." They were remarkable and noteworthy then, yet thousands of them still exist.

At Colinsbroch, in Dunrossness, on the way from Lerwick to Sumburgh Head, I once saw two men, with rivlins on their feet, whose occupations interested me. One of them was cutting grass with the strange and rudely-shaped scythe shown in Fig. 67; and the other was breaking up land with a one-stilted plough.

This last I had never seen before; and, so far as I could learn, no one could see it in actual use anywhere in Scotland except in this particular part of Shetland. Even there, I understood that it was ceasing to be employed in 1864. In a country like ours, where so much mind has been given to the improvement of ploughs, and for the prosperity of which the plough does so much, I felt that the continued use of this rude implement was remarkable and noteworthy. Accordingly, I purchased the plough. Unfortunately, however, the specimen which I figure (Fig. 68) is not the one I bought, but a new one which came to me in its stead, the owner of the one I saw in use being ashamed to send so

Fig 67.—Shetland Scythe. rude a specimen to Scotland.*

* A Shetlander says he is going to Scotland, just as he might say he was going to France or Norway. This habit is a survival of the time when Shetland was not a part of Scotland.

That the one-stilted plough should still be used in our country is remarkable; yet, as an agricultural implement, it

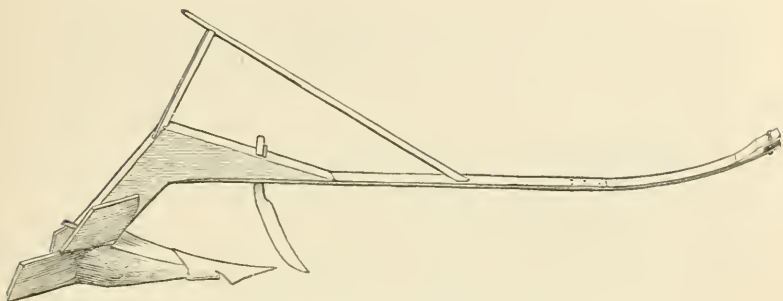


Fig. 68.—Shetland one-stilted Plough.

may be regarded as a long way in advance of the Caschrom or foot-plough, of which there are thousands now in use in the Hebrides and on the west side of the main-land. This

implement (see Fig. 69)

consists of a piece of wood with a knee on it, the part on one side of the knee being considerably longer than the part on the other side, and the two forming together an obtuse angle. The longer part may be regarded as the handle. The shorter is securely fastened to a flat piece of wood, somewhat less than half



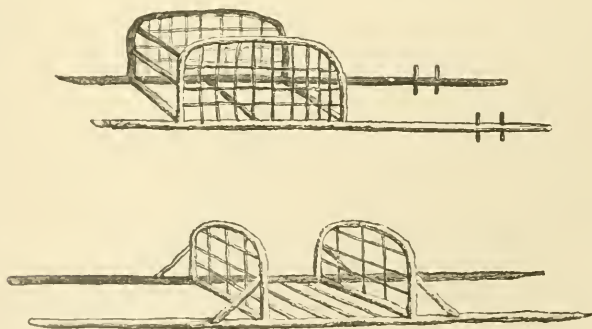
Fig. 69.—Caschrom or Foot-plough of the Hebrides.

the length of the handle, which is made sharp by a shoeing of iron. Near the knee there projects a pin of wood. On this the foot is placed, and the iron-shod point of the implement forced by it into the soil. If the han-

dle is then depressed, the part of the implement forced into the soil rises through it, and breaks up the ground as it does so.

The work which the easchrom does is neither contemptible in quantity nor quality, and there has gone brain to its contrivance. When we remember the littleness of the patches of land which in the Hebrides are, and can only be, brought under cultivation, and the peaty character of the soil, we begin to see the cleverness of its invention. Certainly no plough, whether one or two stilted, could take its place and do its work. If it is right for the people to go on cultivating these little patches of peaty land, then the best instrument with which they can do it is probably the one they use.

WE too often fail to see, in what we call rude implements, that suitability for their purpose, in the circumstances of



Figs. 70, 71.—Two Carts without wheels. Inverness-shire.

their actual use, which we have just now seen in the case of the easchrom. I was not a little surprised, for instance, when I saw in Strathglass, Kintail, and elsewhere, in the years 1863 and 1864, carts in use without wheels (Figs. 70

and 71), exactly of the kind which Burt figures in his celebrated letters (Fig. 72), and which he adduces as evidence of the backward and degraded state of the people of the North Highlands in 1745. But, when I saw what these carts were employed in doing—namely, transporting peats,

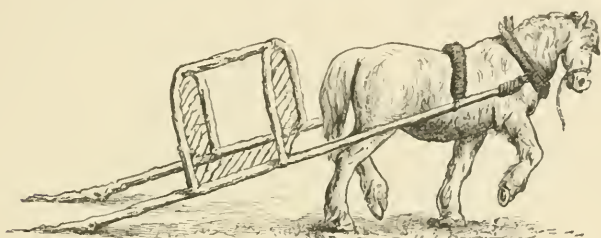


Fig. 72.—Cart without wheels. From "Burt's Letters."

ferns, and hay from high grounds down very steep hills entirely without roads—I saw that the contrivance was admirably adapted for its purpose, and that wheeled carts would have been useless for that work. But I saw more than this: I saw that these carts were used in doing the exact analogue of what is done every day in the advanced south—even where the hand-plough has yielded to the steam-plough, and the sickle to the reaping-machine. When bowlders, for instance, are removed on sledges from the fields in which they have been turned up; when trees are transported on sledges from the high grounds on which they have been cut; when a heavily laden lorry puts on the drag as it comes downhill, what is it that we see but carts without wheels—carts without wheels preferred to carts with wheels, whenever the circumstances in which they are to be used make the want of the wheels an advantage? It is not always an evidence of capacity or skill to use elaborate or fine machinery. A rough, rude tool may for certain purposes be the most efficient, and may show wisdom both in its contriver and employer. It would

certainly show a want of wisdom in the Kintail Highlanders if they used wheeled carts to do the work they require of their wheelless carts. Indeed, they could not so use them, except by putting the drag on hard and fast—being first at the trouble of getting wheels, and then at the trouble of preventing them from turning. I do not ask that this view be taken in regard to every rude-looking implement, whether now in use or in disuse; but I cannot be wrong in holding that we ought to inquire whether such a view may not be taken. The omission to do this would be unscientific, and might leave us with only a half-sight of the truth, if it did not land us in absolute error, as it landed Captain Burt.

A good example of objects, which, so far as I see, can scarcely be regarded as having remained in use because of their fitness for a special purpose, or for a purpose influenced by special conditions, is found in the bone buttons which may still be occasionally seen in the Outer Hebrides. They are of two kinds. One is a flat square piece of bone (Fig. 73), about an inch each way, having four holes cut through it, by which it is sewed to

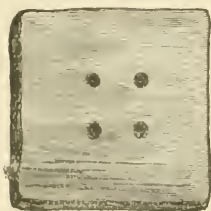


Fig. 73.—Square Bone Button from The Lewis.

the coat. These buttons do not differ essentially from the round bone buttons, which can be bought in any shop for so small a sum that it is difficult to understand why any one should laboriously manufacture them for himself. The other form of button which I saw in The Lewis has more character about it. It is a roughly-cylindrical piece of bone, about one and a



Fig. 74.—Bone Button from The Lewis.

half inches long and a quarter of an inch thick (Fig. 74). At the centre of its length a groove goes round it, forming a sort of neck. The thread which fastens it to the coat embraces this neck, and makes the button secure in its place. In the way of a dress-fastener, nothing simpler or ruder than this button, either in idea or execution, was ever made.

I also show, in Fig. 75, the section of a home-made bone button found in Orkney.



Fig. 75.—Section of Bone Button from Orkney.

Let us imagine the Barvas man, on whom I saw the buttons shown in Fig. 74, dead and burnt for burial. Nothing would remain of him but his bones and his buttons. Suppose these to be swept up and placed in one of his own craggans as an urn, and then entombed in a stone-lined cist. If, a few years after, some antiquarian resurrectionist disturbed his ashes, to what age would they be assigned? The form of the urn would be a puzzle, though the pottery would be found to be as rude as that of any urns. The bone buttons would scarcely be a puzzle; for a better made button than I saw on this Barvas man was actually found among burnt human bones in an urn which was dug up at Murthly (Fig. 76). Burning the man and placing him in a stone coffin would probably be held as proving him to be prehistoric; yet cremation of the dead is coming into fashion again, and I have it



Fig. 76.—Bone Button found with human remains in an urn dug up at Murthly.

from a trustworthy source that at Ness, in the island where this man lived, up to what may be called a recent period, few persons were buried in wooden coffins. There was one large wooden box, called *The Chest of the Dead*, and nearly every one whom death visited in the district was carried to the burial-ground in this chest, and there transferred to a grave roughly lined with stones. Nothing, so far as I know, is anywhere recorded to tell of this old cus-

tom; but we often fail to realize how quickly a custom like this may fall into disuse and be utterly forgotten, and how often it happens that no occasion to describe it arose while it was still familiar. Fifty years ago lucifer matches were unknown, and sulphur spunks and tinder-boxes were in almost every house. Now there is scarcely a corner of the world where lucifer matches may not be purchased; while tinder-boxes have so completely disappeared that it is very difficult to obtain a specimen, and we are already in ignorance of the shapes they commonly took (see Figs. 77 and 78). In about half that time the discovery of paraffine has

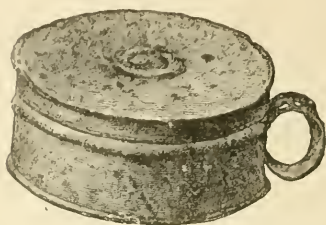


Fig. 77.—A Tinder-box from Uust, in Shetland; four inches in diameter, and $1\frac{1}{2}$ inches deep; made of tinned iron. The flint and steel, and the lid for extinguishing the lighted tinder, are in the inside.

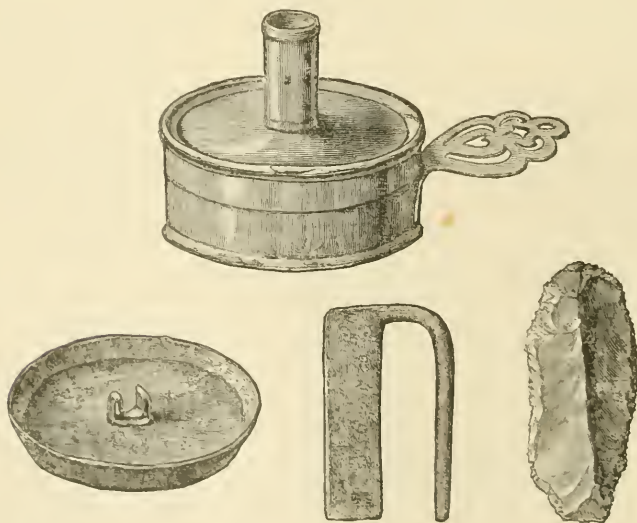


Fig. 78.—Brass Tinder-box, with candle-socket on the lid. The inner lid and the steel and flint are shown. The flint was bought in a shop in Thornhill, where there were many hundreds for sale. The tinder-box is $4\frac{1}{2}$ inches in diameter, and $1\frac{1}{2}$ inches deep.

swept the crusie or oil-lamp out of existence. Thirty or forty years ago there were probably millions of them in Scotland, and now they have a place in collections of antiquities, and can only be bought at a considerable price

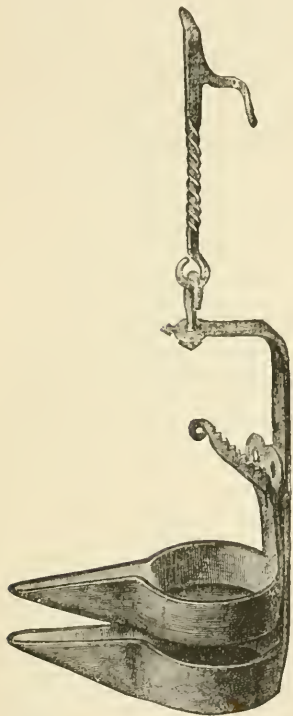


Fig. 79.—A Crusie from Shetland, where it is called a Collie.

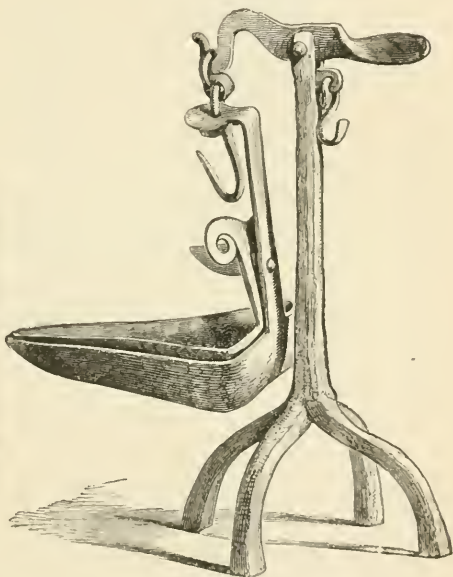


Fig. 80.—A Crusie in stand, from the collection in the National Museum of Antiquities, Edinburgh.

(Figs. 79 and 80). Still more remarkable, perhaps, is the story of the wooden lock, our knowledge of which already greatly depends on models made from memory, though such locks were recently in common use.

It seems natural to pass from speaking of these buttons to say something of a rude brooch which is still made and

worn in the Hebrides. It is now generally made of copper;

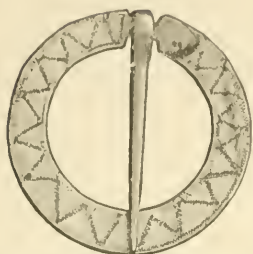


Fig. 81. — Silver Annular Brooch from Inverness-shire. Full size. Ornamentation very simple, but still Celtic in character.

but I figure one made of silver, which I bought at Inverie, from a woman who was wearing it (Fig. 81). This brooch consists simply of a ring, and a tongue hinged on the ring. No soldering is used in its manufacture. It is rude in execution and idea, and, for the ordinary purposes of a brooch, is practically of little use.

We have no reason to suppose that the annular brooches hitherto found in Scotland are older than mediæval. They are now disappearing, and in a few years will have altogether gone from actual life. They acquire a special interest, however, from the fact that the more highly-finished are believed to be the older. During the last century or half-century, only rude specimens have been made, and these often out of the old copper penny. No person, who could afford to buy a highly-finished one, would now care to have it, unless for scientific purposes or as a curiosity. A brooch of much greater utility could be bought for less money. So it has happened that such of these brooches as continued to be made in recent times became ruder and ruder, both in execution and pattern, till a specimen, made out of a curtain ring and a bodle-pin, such as I found in Knoydart (Fig. 82), was reached.

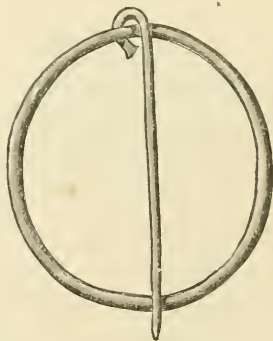


Fig. 82. — Annular Brooch from Knoydart, made of a curtain ring and a bodle-pin. Full size.

To illustrate this process of degradation, I give in Figs.

83 and 84 a representation of the two sides of a somewhat handsome annular brooch. It is made of brass, and the



Fig. 83.—Highly ornamented brass Annular Brooch ; 6½ inches in diameter.

character of its decoration is Celtic. It shows, for instance, the interlaced ornamentation, and a certain Celticism also in the general pattern.

In Fig. 85 I give a sketch of another annular brooch, also made of brass, the ornamentation of which is on the same plan as that shown in Figs. 83 and 84, but lower in character and execution. No one, I think, who compares the two brooches will doubt that the ornamentation on this brooch is a debased copy of that on the brooch shown in Fig. 83. It is scarcely conceivable that the reverse is true—that the high ornamentation of Fig. 83 has grown out of the very poor decoration of Fig. 85. At the same time it must be borne in mind that it is difficult to say of any particular specimen that it is older or later than any other specimen,

unless there be something in its history to reveal the fact, because it would be possible to make specimens of all the styles now or at any time, and all of these specimens would, of course, have the same age. The difficulty in regard to the particular specimen, however, may not exist in regard to the type or style.



Fig. 84.—Back of Fig. 83.

In Fig. 86 I give still another of these annular brooches, recently made, and entirely destitute of ornament.

It would not be easy to find a better illustration of that dying out by degradation, to which I have so often referred, than these woodcuts may be fairly held to supply. If the view I take is correct, we have the oldest and best style in Fig. 83, and the newest and worst in Fig. 82, the downward steps being well shown in Figs. 81, 82, 85, and 86.

I HAVE frequently spoken of the singular manner in which the use of some rude way of accomplishing an end refuses



Fig. S5.—Brass Annular Brooch. Decoration rude, but showing a trace of Celticism in its character. $3\frac{1}{2}$ inches in diameter.

to die out even among those who have a perfect acquaintance with the better methods which have been discovered.

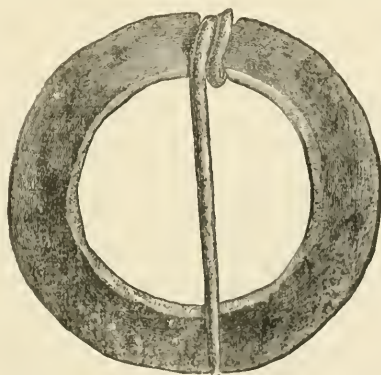


Fig. S6.—Rude modern Annular Brooch, without decoration. Copper. Full size.

This struck me very forcibly when I came upon a Shetlander weighing cheese with a bismar. He has weighed no

more cheese with that bismar, however, for I carried it off, and now figure it (Fig. 87). It is just a steelyard, with this



Fig. 87.—Shetland Bismar; 32 inches long.

difference, that it has a fixed weight and movable fulcrum instead of a fixed fulcrum and movable weight. Another Shetland bismar is shown in Fig. 87a.



Fig. 87a.—Shetland Bismar.

The Shetland bismar is made of wood, and is clumsy and ill-fashioned. I wish to direct special attention to the rude way in which it is made; and I do so in order to point out that a weighing instrument may be found involving no higher knowledge of mechanics—in other words, as rude in its conception—which, nevertheless, is made of the most suitable material, and exhibits as much skill and taste in its construction as would be needed to make the most elegant balance in Europe. Such an instrument, from the interior of India, is shown in Fig. 88. In the Shetland bismar the workmanship and the idea run parallel, both being low; but in the bismar from India, though the idea is as low as in that from Shetland, the execution involves the highest attainments of the skilled artisan. Notwithstanding this, I scarcely think any one will regard it as even probable that the maker of the rude bismar from Thule was inferior intellectually to the Indian maker of the elegant and highly-finished steel bismar. Does not this show that caution is needed when we attempt to gauge man's mental condi-

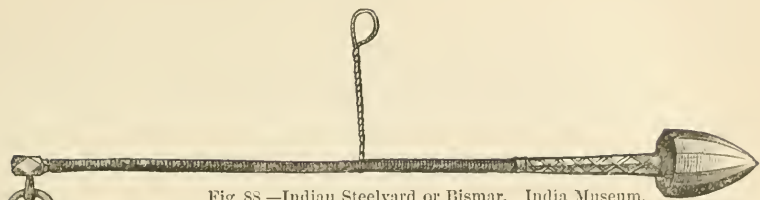
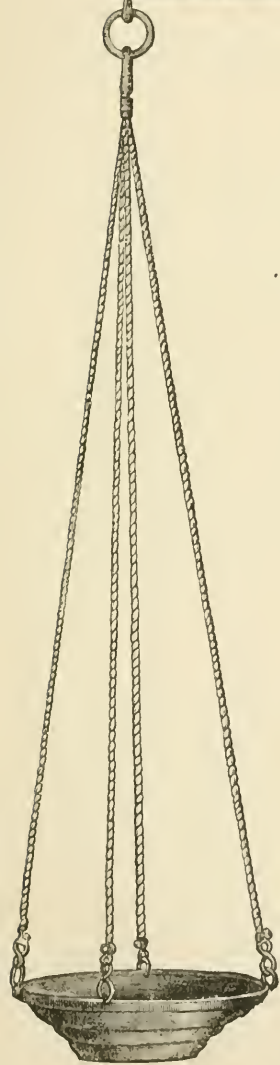


Fig. 88.—Indian Steelyard or Bismar. India Museum.
 Sketched by Mr. Woon. One-fourth size.

tion by means of his works and practices! Displays of great skill and refinement prove capacity and culture; but does it follow that incapacity must exist where such displays are not found?

IN this lecture I have brought under notice not one or two, but a considerable number of old Scotch things, and I have still more of them to refer to in the lectures which follow. I call them old; but it will be understood that they are only old in a certain sense, since they have all been recently made and are still in use. They are neo-archaic. Perhaps some may think that, for the purpose I have in hand, it would have been sufficient if I had noticed one or two of these things, and had given the assurance that there were many more. I shall not occupy time in showing why I think otherwise, but content myself with pointing out that, if I had so restricted myself, I should not have been able to ask whether the many woodcuts which illustrate these lectures might not be the illustrations of a book of travel in savage lands instead of a set of sketches,



many of which are taken from a journal of recent travel in Scotland. Still further, if I had so restricted myself, I should have left untold a great deal of what is either new or little known and unrecorded, having an interest apart from the special use to which I have put it, in showing how desirable it is that we should argue back from the known to the unknown when we inquire into the condition of early man.

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LECTURE V.

(2D MAY, 1876.)

CLASSIFICATION OF ANTIQUITIES INTO THOSE OF THE STONE, BRONZE, AND IRON AGES.—STONE TABLE.—HEATING STONES.—IRONING STONES.—STONE SINKERS.—STONE SOCKETS AND SPINDLES.—STONE LIDS AND CRUSHERS.—STONE WEB SMOOTHERS.—RUDE STONE IMPLEMENTS OF SHETLAND.

WHAT I propose to do first in this lecture is to show the value and nature of a classification of antiquities into those of the stone, bronze, and iron ages—the respects in which this classification is practically useful—and the respects in which it leads to error, when its nature is imperfectly understood. It appears to me that by doing this I shall secure a better understanding both of what has been already said and of what is to follow.

OBJECTS of antiquity are divided into three classes—those of the stone age, of the bronze age, and of the iron age. This classification has a practical utility; but, nevertheless, as will appear from what follows, it may lead to various errors.

Antiquities of the stone age are regarded as the relics of men who were ignorant of the use of metals, and who depended “on stone, bone, wood, and other readily accessible natural products for their implements and their weapons of the chase and war.” Those of the bronze age, again, are

held to be the relics of men who had acquired a knowledge of copper, or of copper alloyed with tin, and who used this knowledge to make cutting implements of a more serviceable character than those which could be made of stone. Those of the iron age are the relics of men who had discovered the way to make and use iron, and who were thus acquainted with a material which superseded both bronze and stone, as regards the character and value of the tool or weapon which could be made of it.

This is an ingenious classification, and it is one which has undoubtedly proved itself to possess a practical utility. It originated in Denmark. The discoveries which have been made there appear to fit into it admirably: as, indeed, is now held to be almost equally true of all Western Europe. It is not a classification, however, which has been shown to be applicable to all parts of the world. On the contrary, there are some states of civilization, both past and present, which furnish no records, or very doubtful records, of a stone age; while others yield no satisfactory evidence that they have passed from the stone through a bronze into the iron age. So far as Denmark is concerned, "the iron age is supposed to go back to about the Christian era, the bronze age to embrace a period of one or two thousand years previous to that date, and the stone age all previous time of man's occupation of that part of the world." This is a tolerably late and authoritative statement of what is believed to be true of Denmark. It is scarcely necessary to point out that it is vague and indefinite—full of round numbers, and even prefixing some of these with the safe and useful word "*about*." I take no objection to this, but it is well to note it. It is also desirable to remember that, even as thus guarded, the statement in question does not embody a belief which obtains universal acceptance at the hands of Danish archaeologists themselves. According to the writer whose

opinion has been quoted, less than four thousand years ago Denmark was peopled by the *stone-age man*. Of when he came to Denmark, and how long he occupied it, we know absolutely nothing. That he existed in Denmark about four thousand years ago is a guess, and it may be a reasonable guess, as regards that particular country. To other countries, however, even to those which are close to Denmark, it may have no applicability. In them the stone age may have lasted longer or may have been sooner over; the bronze age may have had a shorter or longer existence—a feebler or a better marked character; and the iron age may have been entered with more or less directness from the stone age.

This classification, therefore, does not in any correct sense mark points of time or furnish dates, unless, perhaps, in regard to some particular district or country to which it has been shown to be applicable, and in which such collateral discoveries have been made as are sufficient for the foundation of a guess at a date. Such a guess, however, depends on the collateral discoveries, and cannot be reached through the aid of the classification alone.

Still less correctly does this classification indicate necessarily successive stages of capacity or culture. The relics of the stone age, wherever they are found, must, in the present state of our knowledge, be regarded as revealing the existence of man, in a rude and uncultured condition, at some time or other, in that place. But it by no means follows that the next stage of his culture will invariably have for its chief characteristic a knowledge of the usefulness of bronze and of the way to obtain it. It is quite conceivable that he should pass from the stone into the iron age without knowing anything about bronze. It is more than conceivable. The inhabitants of the heart of Africa are already in their iron age. They smelt the iron ore and manufacture good iron implements. They do much more than use

tools and weapons of iron sent to them from more advanced countries; they use tools and weapons which they themselves have made out of the metal which they themselves have extracted from the ore. There are even centres of trade in iron among them—tribes, or portions of tribes, which give themselves up to this manufacture, and supply tools and weapons to those who, in a more special manner, give themselves up to agriculture, the chase, or war. In the fullest sense, therefore, these people are in their iron age, but we have no evidence as yet of their having entered it through a bronze age.

But it is possible to go farther than the mere assertion that a nation may pass from its stone into its iron age without passing through a bronze age, since it is scarcely conceivable that any of the races now on the earth who are still in their stone age will, as they advance in culture, pass through a bronze into an iron age. Such races in these times are certain to come into communication with other races familiar with all the uses of iron, and the implements of iron obtained from them will directly supersede the implements of stone. There is not the slightest chance of their coming into contact with a people who are in their bronze age, and who would either furnish them with, or teach them the art of manufacturing weapons out of that material. Where, indeed, is there a nation now on the earth which may properly be described as in the bronze age of its culture? Nay, more, where is there a nation of which it may be correctly said that it is even emerging from a bronze age? There are people, perhaps, who use bronze more than we do; but they have, at the same time, a full knowledge of iron, and employ it for a vastly larger number of purposes than they employ bronze, though they may still preferentially use that alloy in making certain implements for which they think it more suitable, perhaps for no better reason than force of habit. This state of matters, however,

can in no sense be regarded as descriptive of a people who are in the bronze age of their culture—that is, of a people who are giving up, or have given up, stone for bronze in the manufacture of weapons and tools, and who are ignorant of the uses and superiority of iron.

Still further, with reference to the errors which may arise from regarding this classification as indicating necessarily successive stages of culture, it is desirable that it should be understood that, though it may be correctly said of a people that they are in their iron age, this would not at all imply that they were in an advanced stage of culture or civilization. It may be true of them that they are in their iron age, while it is also true that they are barbarians and savages. We ourselves were already in our iron age, and had been so for we do not know how long, when the Romans paid us the first of those visits which exercised such an important influence over the destinies of our islands; but we were also in a state of savagery, if we do not disbelieve what has been written of our condition at that time. At this very day the negroes of Central Africa are in their iron age; yet, in the opinion of some, they are scarcely men; and if men, they are men so low in the grade of civilization that from among them the slaves of the world are drawn. Woolly-headed, black-skinned, prognathous negroes, bought and sold and stolen like cattle, going naked, eating raw flesh, they are nevertheless in their iron age, and we have little or no evidence as yet of their ever having been either in a stone or bronze age.

It is desirable to go still further in showing how this classification is defective when it is regarded as marking necessarily successive steps of progress, and to ask whether it is not difficult to see why a man who uses bronze weapons should be inferior either in culture or capacity to a man who uses iron weapons. There are good reasons for believing that, in Western Europe, he was inferior in culture as well

as earlier in time. The discovery of bronze, however, and the knowledge of how to make it, may, as a mere intellectual effort, be regarded as rather above than below the effort which is involved in the discovery and use of iron. As regards bronze, there is first the discovery of copper, and the way of getting it from its ore; then the discovery of tin, and the way to get it from its ore; and then the further discovery that, by an admixture of tin with copper in proper proportions, an alloy with the qualities of a hard metal can be produced. It is surely no mistake to say that there goes quite as much thinking to this as to the getting of iron from its ore and the conversion of that iron into steel. There is a considerable leap from stone to bronze; but the leap from bronze to iron is beyond question comparatively small. If, indeed, from bronze to iron in the progress of culture there be really a step at all, it certainly need not be a high one; and, as certainly, whether small or great, it is a step which need not of necessity be taken at all, since among some races the appearance of bronze, for whatever purpose used, must follow and not precede iron. It appears, therefore, that we require to examine the antiquities of each country separately, and from them judge whether there is evidence in the history of its inhabitants (so far as that history is revealed by these antiquities) of the existence of successive stone, bronze, and iron ages constituting successive steps in their advancement.

If it be asked how bronze was discovered, and introduced as a material out of which weapons could be made superior to those of stone, all the answer that can be given is that it is not known. It seems highly improbable, however, if not altogether absurd, that the human mind, at some particular stage of its development, should here, there, and everywhere—independently, and as the result of reaching that stage—discover that an alloy of copper and tin yields a hard metal,

useful in the manufacture of tools and weapons. There is nothing analogous to such an occurrence in the known history of human progress. It is infinitely more probable that bronze was discovered in one or more centres by one or more men, and that its first use was solely in such centre or centres. That the invention should then be perfected, and its various applications found out, and that it should thereafter spread more or less broadly over the face of the earth, is a thing easily understood. This, indeed, would just be the history of many similar discoveries.

For instance, let us suppose a fourth age, later than the iron, and let us call it the gunpowder age. Every one instantly feels that there is really such an age in the history of the world and of man as a whole. Its existence may at any rate be granted, for the passing purpose of throwing light on the unknown through a study of the known. How, then, would the case stand with gunpowder? It is not necessary to enter into the controversies regarding its discovery. It may be assumed here that to an accident in the hands of an alchemist in Germany, about the end of the thirteenth or the beginning of the fourteenth century, Europe probably owes its knowledge of the explosive properties of that mixture of substances which go to make what is understood by gunpowder. Before that time the battles of Europe were fought with swords, axes, spears, and bows and arrows; and these furnished also the weapons of the chase. Fire-arms were unknown. Ere the lapse of a single century, however, all the nations of Europe were familiarly and practically acquainted with the properties and uses of gunpowder. And now, after the lapse of but a few centuries, it may be said that all the nations of the world—inclusive of many barbarous nations—are in that position. But does any one for a moment suppose that this spread of knowledge, as regards gunpowder, has been due to a series

of independent discoveries here and there over the earth's surface? or that the using of gunpowder by all these differently-conditioned races has depended on their reaching a certain stage in the growth of culture or capacity? Can it be doubted that this spread of knowledge has been due to the operation of the ordinary agencies which promote among men the diffusion of a knowledge of such things as immediately affect their safety and material well-being?

It may, of course, be said that the acquisition of such knowledge by any nation, whether it comes to them from without or is gained by their own intellectual efforts, equally constitutes a stage forward in their culture; and that is true. But it is important that the sense in which it is true be rightly understood. The primeval man is commonly believed to have been developed into the stone man, not by any such process as has just been described, but in virtue of a *growth* which was the outcome of the struggle for existence and the survival of the fittest, and which everywhere had one of its expressions in the manufacture of weapons and tools out of stone. When the stone age is talked of, there is usually meant not only a stage in actual culture, but also a stage in the capacity for culture. It is not necessary at present to show whether this is true or not as regards the stone age, but it is clear that it is possibly sometimes, and probably often, not true at all of the so-called bronze and iron ages, which may be nothing more than the analogues of the gunpowder age, into which, though it is the last and highest, savages of the stone period may pass at once without losing their savagery, or manifesting any real advance either in actual culture or fitness for culture. Captain Moresby, speaking of certain tribes of New Guinea, some of which were never before visited by the white man, says, "At times I found myself drawing a contrast between the squalid poverty too often seen in humble life in England

and the plenty and cleanliness that met us here at every step ;” and he asks, “What have these people to gain by civilization ?” Can any one doubt that in a few months Captain Moresby could have taught these people the properties of gunpowder and the use of the rifle, and so have lifted them by a great leap from their stone age into a practical knowledge of one of the last outgrowths and strongest expressions of the iron age ? Are there not, indeed, at this moment, in many parts of the world, savage races who have been so lifted, and are described without hesitation as still savage, though, when they go to war or to the chase, they carry fire-arms instead of stone tomahawks and flint-tipped arrows ?

From what has been said, four things are clear : That a classification of antiquities into those belonging to the stone, bronze, and iron ages has no absolute chronological significance, and does not furnish dates ; that it equally fails to indicate stages of culture and capacity, in the sense of being invariable gradations of progress toward the existing culture and capacity, necessarily consecutive, and universally applicable to all the races of the human family ; that the three ages, even though they may successively present themselves in two countries lying close to each other, do not of necessity synchronize—that is, the one country may still be in its stone age while the other has passed into its iron age ; and that the antiquities of each country must be separately studied with reference to the fitness to it of such a classification.

There are still some other points affecting the value of this classification which it is important to bear in mind. It is so clear, for instance, as to go without the saying, that these so-called periods or ages, even in countries where they have had a clear existence, must always have considerably overlapped each other—that is, the use of stone would be prolonged into the bronze period, and the use of bronze, in

like manner, into the iron period. Even stone, bronze, and iron may all coexist. But more than that, the middle state may have wholly died out, and the first and third may be found coexisting—though in such cases, in all probability, the first will exist feebly. There is, and there can be, nothing of the nature of a sharp line of separation between the periods—that is, there is no sudden cessation of the use of stone when the use of bronze begins. The two things may not even be joined together by a mergence into each other, but by a true overlapping—of the same character as takes place, for example, between the periods of wooden ships and iron ships, which is not of the nature of a fusion of the wooden into the iron structure, but a continuance of both structures—the first losing, while the second gains.

In the study of this classification, it should also be borne in mind that the relics of the stone period are imperishable, and that the material of which they are made has no intrinsic value; the material of which those of the bronze period are made is also very enduring, but it has a considerable intrinsic value, leading to the destruction of bronze objects when discovered: the relics of the iron age, again, are extremely perishable. Hence we should expect that the relics of the stone period would be more abundant than those either of the bronze or of the iron period. This is probably the fact, and it is important to keep it in mind. Objects made of bone, of horn, and of clay, which often have a place among the relics of the stone age, are also difficult of destruction, and of little value in themselves, and hence they, too, have been preserved when later and more precious objects have disappeared.

Another thing to bear in mind in this study is that it is not the general use—the use for general purposes—of stone, bronze, and iron which constitutes strictly the basis of this classification, but rather the use of these materials for spe-

cial purposes—namely, for the manufacture of cutting tools, weapons of war, and implements of the chase. Materials, however, used extensively in this way will certainly be used also to a greater or less extent in other ways—in the manufacture, for instance, of domestic utensils or agricultural implements; and thus it happens that all those who describe the relics of the stone age, describe many objects other than tools, and weapons of war, and implements of the chase. They describe whatever is believed to have been made by, or to have belonged to, the man of the stone period—his dwellings, monuments, pottery, domestic utensils, agricultural implements, etc. These need not be always of stone. They may be of the other readily available materials of which he made use, such as bone, horn, clay, and wood.

THERE are some neo-archaic stone implements and objects occasionally to be seen in Scotland, which deserve here a brief notice. Some of them may perhaps be rightly regarded as survivals of the stone period; and many of them might possibly be regarded as being of great antiquity, if they presented themselves without a history.

This might be true even of a stone table which I once saw in a wretched hovel at Ramsraigs, in the parish of Latheron, in Caithness. It was formed of two rude blocks or pillars of stone, made earth-fast, and standing about $2\frac{1}{2}$ feet above the floor, on which there was laid an undressed slab, 5 feet long and $2\frac{1}{2}$ feet broad, to form the table-top. No tool had touched any of the stones of which it was made. The members of the family were sitting round it at dinner when it attracted my attention, and there was no other table of any kind in the house. When the turf hut in which I saw it falls to ruin, nearly all trace of a human habitation there will disappear, for the hovel will crumble to dust and be literally blown away; but the solid stone table will re-

main. What will then be thought of it, when discovered by the antiquary, it is not easy to tell.

In 1867 I saw in Caithness an object which might easily become an antiquarian puzzle. It was a huge undressed monolith, 9 inches thick and 30 inches wide, and standing 5 feet out of the ground. It was solidly earth-fast, several feet of the stone being said to be below the surface. Its general look was that of an ordinary rude monolith or standing stone. Such, indeed, at first sight, I thought it, and I only learned its true character when I made inquiries as to the meaning of a date which was cut on its face. I was then told that it had been erected about six years before my visit, to commemorate the marriage of a man not much liked in the district—erected, indeed, on the day of the marriage, the date referred to being the record. For some years after its erection, when that day came round, it was customary to whitewash the stone.

When I first noticed the inscription, I concluded that it had been cut by some idle hand on one of our old standing stones; but on reflection I came to the conclusion that this was improbable, because such stones are usually held in a sort of veneration, which tends to preserve them from anything like contemptuous treatment. Hence the inquiries I made and their interesting result.

Perhaps the date which happens to have been cut on this stone may long fix its true story to it; but, without the date, a century hence or less it would almost certainly be regarded as of the same age as are other standing stones, from which there is nothing else to distinguish it.

I pass from the modern stone table and the modern standing stone to the notice of another object which has, perhaps, a somewhat better claim to be regarded as a survival of the stone age.

Before the use of metals, and while the people had no other vessels in which to hold water, or milk, or other fluids, except vessels of stone, or such clay vessels as were described in a former lecture, it is evident that the heating of these fluids, when that was desired, would prove a matter of some difficulty by any procedure to which we are accustomed. We hear of the Scotch in times past seething the flesh of the animal they killed "in the skin of the beast, filling the same full of water;"* and Froissart tells of their cooking their beef in skins stretched on four stakes.† But it was not thus they commonly heated a fluid. This was done by the simple process of placing a hot stone in the vessel which contained the fluid, and which could not itself be safely subjected to the direct action of the fire. Now it happens that this practice is still followed in some remote parts of Scotland, and especially in the remote islands. Even when there are iron vessels in the house, the fluid is sometimes by preference placed in a vessel of earthenware and heated by plunging into it a hot stone—one or two stones being kept constantly in the fire to be ready for this use. I possess more than one stone which I found so employed in Shetland. These heating stones soon crack and fall to pieces, and thus require to be frequently replaced. In form they are elongated, and they weigh from two to four or five pounds. It has been often stated to me that the cooking or heating of certain fluids is best done in this way, just as some people think that the best way of heating ale or porter is by plunging the hot poker into it.

There occurs another use of stone in some of the districts in which I found the people heating water or milk in the

* "Certaine Matters concerning the Realme of Scot.," Lond., 1603.—Sig. K.

† Referred to in Dalrymple's "Frag. of Scot. Hist.," Edin., 1798, p. 14 of "Des. Reflect."

way just described, which seems to me interesting, though it could scarcely have existed in the stone age. Such an implement as I am going to describe would probably have been useless then, there being no work for it to do. I shall most readily make what I refer to understood if I say that, in certain parts of Shetland and Orkney, the smoothing-iron with which clothes are dressed, or as we say *ironed*, is a stone. I first heard of these ironing stones through the

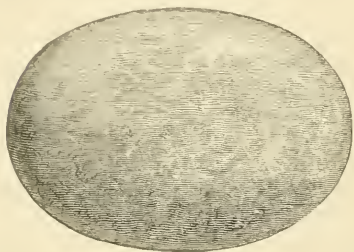


Fig. 89.—Stone used in Orkney as a Smoothing-iron for ironing clothes. It is a large egg-shaped water-worn granite pebble, weighing 3 pounds, and measuring 5½ inches in its long, and 4 and 2½ inches in its shorter diameters.

late Mr. George Petrie of Kirkwall, and through him the one shown in the woodcut, Fig. 89, came to me. But I know them to be in use also in the west of Shetland. It is a large smooth water-worn stone. When heated it is grasped by the hand—a woollen holder intervening to prevent the fingers from being burnt.

I am assured that excellent work can be done with it; but it is extremely difficult to understand why a tool now so curiously linked to iron by its very name, and which, when made of iron, is so inexpensive, should still be made of stone. Of course stone is even less expensive than iron. It costs nothing, and that perhaps is the chief cause of its being still used in this way among a people who require to consider cost carefully. Mere cheapness, however, would be a reason for such a use of stone everywhere; and perhaps we should not lose sight of the influence of isolation and remoteness from cities, which lead to a certain independence of action, and the supply of wants out of what is available on the spot.

In Norway, smooth, rounded lumps of glass are still used as smoothing-irons, and an implement of this kind was re-

cently found in a Viking grave at Ballinaby, in Islay. They are much smaller than the Orkney stone I have figured, being about 3 inches in diameter and 10 ounces in weight. It is understood that they are not heated when used.

It may be difficult to tell why stone should still be used to make such objects as the two which I am about to notice, and which I saw in Shetland. One was a stone substitute for the block of wood usually fastened to the end of a horse's stable halter. It weighed nearly 2 lbs., and was a roundish disk, slightly water-worn, with a hole through it. The other was a flattish, irregularly-shaped, water-worn piece of sandstone, $5\frac{1}{2}$ inches long, about $3\frac{1}{2}$ inches broad, and about three-fourths of an inch thick, with a hole through it at one end, by which it was tied loosely between the horns of a cow, to prevent her from starting and running away (see Fig. 90). This stone I saw on a cow's head, and others, not in actual use, were shown to me. There was one in the collection of antiquities at Lerwick, which was known to have been so used. It was placed in the local museum to explain the probable purpose of a stone of exactly the same character, which had been found in circumstances leaving little doubt as to its great age.



Fig. 90.—Stone fastened between a cow's horns in Shetland. The hole, which is about 1 inch in diameter, has been rudely picked through from both sides.

There is a class of stone objects which are nearly always to be seen in collections of antiquities, and which are now correctly called sinkers. They have been often found under circumstances which indicate a great age. Worsaae fig-

ures them among the antiquities of the stone age in Denmark. They vary much in form and in character. Most of them are simply bored stones—generally with one hole roughly picked or ground through them, but occasionally with two. Sometimes they have a groove cut down one face of the stone and running over its end, and another similar groove cut transversely to this; or the groove may run round the circumference of a flattish ovoid water-worn pebble, giving it somewhat the appearance of a ship's block.

These stone sinkers I have frequently seen in use. As regards the first type, those which are simply broad stones, I have seen the same man with one of them at the end of one line, and at the end of the other a sinker of lead cast in a mould and tastefully shaped. Usually the bored sinkers are water-worn stones, selected for suitability of shape; but sometimes they are made of a piece of stone roughly flaked into a proper form; while at other times, where the soft soapstone is found, there is more or less neatness in their design, and they may even be found imitating the form

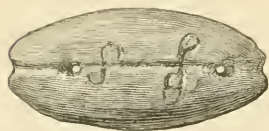


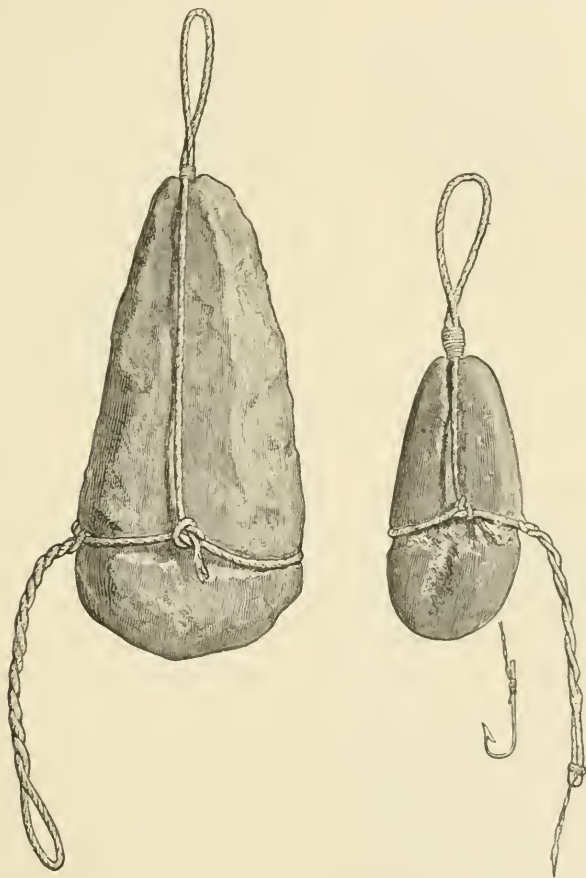
Fig. 91.—Sink Stone of Steatite from Shetland; weight, 14 ounces.

of the leaden sinker, or having rudely cut on them the initials of their owner (see Fig. 91). It may happen again that they are entirely natural stones, that is, both their form and the hole through them may be due to natural agencies.

A sinker of this last kind I once saw with a Shetlander. It was of flint, and he said he had brought it from "foreign parts," because he thought it would be useful at home as a sinker.

Of one of the types of sinkers, that showing the two grooves crossing each other, there was some difficulty in seeing the exact way in which the line and hooks were made fast to the stones, and what purpose the grooves served. Some stones of this kind have been found in circumstances

indicating great age; and I remember hearing a distinguished antiquary, no longer alive, speculating ingeniously as to whether they could really have served so commonplace a



Figs. 92, 93. — Sink Stones from Walls, in Shetland. The larger is a roughly-flaked piece of sandstone, and the smaller a water-worn beach stone. In order to make the cord grasp these stones securely, grooves are roughly cut in them in the way indicated by the woodcuts. The larger stone is 8 inches long, and weighs 43 ounces; the smaller, to which the hook is still attached, is 5 inches long, and weighs 11 ounces.

purpose as that of sinking a fisherman's line. But I have been able to set the question at rest by procuring two specimens from the parish of Walls, through the Rev. James

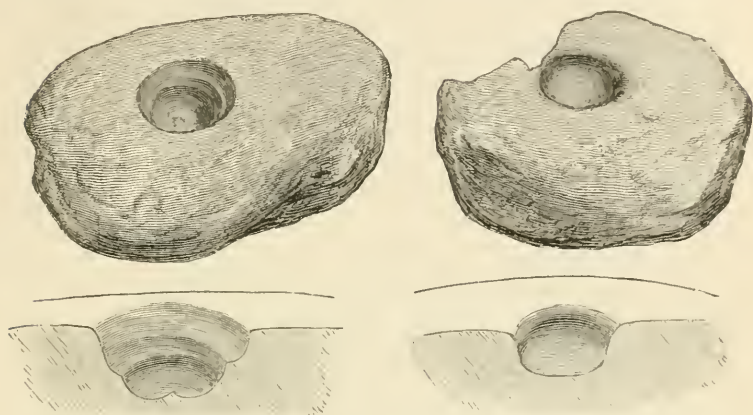
Russell, with all the appliances on them exactly as they were when actually in use a few years ago. (See Figs. 92 and 93.) Sinkers of this form vary in size. They are generally, I think, larger than those of the bored form; and I understand that this is explained by the fact that they are chiefly used when fishing in deep waters.

It is not solely, however, in those districts of our country which we regard as outlying and remote that we encounter fishermen using stone instead of lead or other materials for the manufacture of sinkers. On the Tweed to this day the nets are weighted by bored stones, and specimens of these are placed in museums of antiquities, not because they are themselves objects of antiquity, but because their history being accurately known, they teach lessons of caution in dealing with objects not very dissimilar, about the history and use of which we have no accurate knowledge.

There is another class of worked stones not unfrequently turned up, the use and age of which would certainly be a puzzle if they had not been still found in actual use. They may be of any age, and therefore they also properly appear in collections of antiquities. I refer to the stones which were and are used as the sockets for the spindles or vertical axles of millstones, or as the sockets in which gate-posts turned. They are usually rough, unshaped boulder stones, often of the hardest and toughest quality, and the deep, cup-like excavations found on them have a highly polished surface, with linear markings, which show that something has revolved in them. (See Figs. 94 and 95.) We can have no doubt as to what these stones are, because we find them still in use.

Sometimes the spindle or gate-post which turned in them was itself tipped with stone. A specimen of a stone, said to have been used in this way, is shown in Fig. 96, and we

know of other specimens still revolving in their sockets. The one I figure, perhaps, ceased to be an interesting object



Figs. 94, 95.—Stone Sockets in which spindles or vertical axes of millstones revolved. Views and sections.

when its probably recent use became known; but it lost its interest in this way only to those persons who deal with antiquities merely as curiosities. To those who care less for the object itself than for the lessons which are to be drawn from it, a knowledge of the purpose it served gave it a fresh and additional interest. Though depriving it of all claim to be ancient, it left the stone useful to the student of antiquities.

I once saw the post of a field-gate turning in a hollow in an earth-fast stone, and not one hundred yards away I saw another gate entirely and skilful-

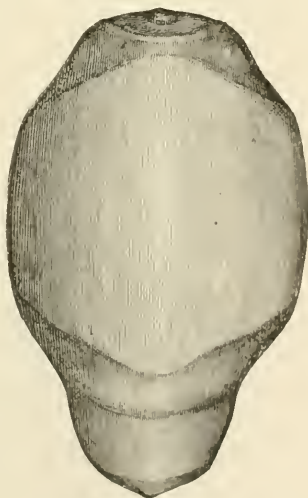


Fig. 96.—Stone Tip for spindle.

ly made of iron. The owner of the two gates thought the old-fashioned one in many respects the better, and he half convinced me that he was right. He wholly convinced me that the continued use of what we choose to call a rude mechanical arrangement is no necessary evidence of mental incapacity in the user. Both of these gates were set up by him, and he wished to know which of them was to be taken as the indication either of his capacity or of his culture.

There are two objects which have been frequently found in the ruins of the circular towers called Brochs, and in underground or Eirde-houses, and which may still be seen in use. The first is a flat, thin stone, roughly reduced by chipping to a circular shape, showing no polishing or grinding, and varying from 3 to 25 inches in diameter, and in thickness from one-quarter to three-quarters of an inch. I have seen these stones extensively in use in Shetland, Orkney, Caithness, the Hebrides, Sutherland, Ross, and Inverness. (See Fig. 39.) They are nothing but lids; and they are to be found acting as lids on the top of the water-pail, meal-cask, cream-jar, sugar-basin, etc. Why people should continue thus to make lids of stone, even in districts where wood is abundant, it is very difficult to see, but the fact that they do so, it is important to know.

The other object, often found in subterranean structures and in the ruins of brochs, is a cylindrical water-worn stone, the roughened and worn ends of which show that for some purpose or other it has been in frequent and steady use. If I said that stones of this kind were once used to break the bones of animals in order to get at the marrow, perhaps I should be right; and, as there is believed to be something distant and mysterious about that practice, such a

use of them would impart a sort of dignity. But there can scarcely be a doubt that such stones were used for hundreds of purposes, and in all ages. I once saw one lying on the window-sill of a cottage in the parish of Watten, and learned that it had been used in that house for fifty years and more to pound salt. The ends were roughened by its being used as a hammer to break all sorts of things—"maybe, even," as the owner said, "to drive a nail."

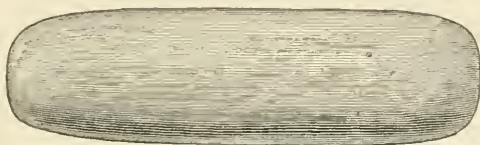


Fig. 97.—Pounding-stone from East Watten, in Caithness; $7\frac{1}{2}$ inches long and about $2\frac{1}{2}$ inches in diameter. A water-worn sandstone pebble; sides smooth, ends rough.

This stone is shown in Fig. 97, and no one can detect a difference between it and the pounding-stones which are often discovered in the exploration of brochs, cirde-houses, etc.

In Fig. 98 I show another worked stone, which might readily become a puzzle to the antiquary. It is neatly made

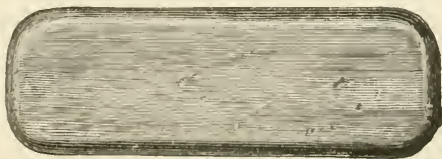


Fig. 98.—Weaver's Rubbing-stone from Fifeshire; 7 inches long, $2\frac{1}{2}$ inches wide, and five-eighths of an inch thick. Hard black stoue, smooth and polished.

and highly polished. When I first saw it, it was in the hand of a Fifeshire weaver, who was using it to calender his web.

With the exception, perhaps, of the stone just noticed, none of the objects I have spoken of in this lecture show



Fig. 99.—Shell Lamp, or Crusie.

any appreciation of beauty either in their form or finish. It does not necessarily follow, however, when an object or implement has a certain beauty of form or finish, that this will always arise from an appreciation of beauty in its user or maker. For example, every one will admit that the lamp shown in Fig. 99 is elegant and pretty. Nothing, however, but the fact that it is easily obtained, leads the deep-sea fisherman at his station on Fetheland Point to employ a shell for a crusie. His doing so does not prove the existence in him of a sense of the beautiful; nor, on the other hand, does his coarsely-made sinker prove the reverse.

Weavers' smoothing or rubbing stones must have been at one time very numerous in Scotland. The one shown in Fig. 98 I found in use in a Fifeshire village; but I have also seen them in other counties, and they are said to be still common in Forfarshire. An implement serving the same purpose is sometimes made of hard wood or bone, but of whatever material it is made it is called a *stone*.

These rubbing-stones are generally, I think, of the same

shape as the Fifeshire specimen (Fig. 98). Professor Duns obtained one from Hilderston, in Linlithgowshire (Fig. 100). Occasionally, however, the shape is different. Sometimes,

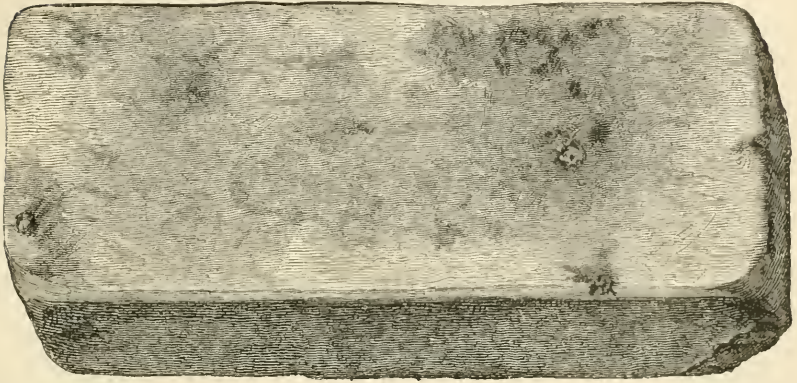


Fig. 100.—Smoothing-stone from Hilderston, Linlithgowshire; 5½ inches in length.
Gypseous alabaster.

for instance, the weaver's smoothing-stone is nothing but a rolled pebble, like the specimen sent from Berwickshire to Professor Duns, and represented in Fig. 101. At other

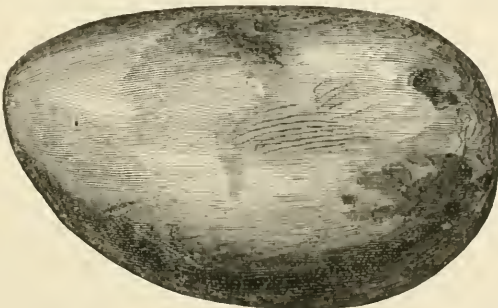


Fig. 101.—Smoothing-stone from Berwickshire; 4 inches long. Rolled pebble of coarse quartz.

times, these stones are rounded at one end. This form occurs in a specimen from Glencairn, in Dumfriesshire,

and is shown in Fig. 102.* Another stone of this shape came to Dr. Duns from Bathgate, but its smaller size, and

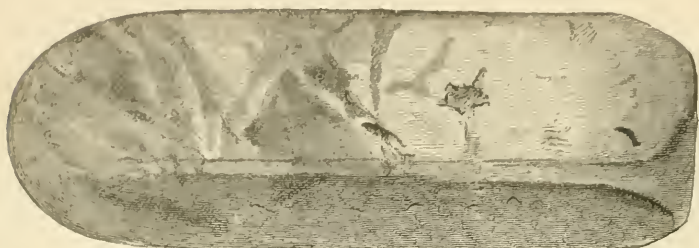


Fig. 102.—Smoothing-stone from Glencairn, Dumfriesshire; $5\frac{1}{4}$ inches long. Heavy spar. Polished on sides and ends.

the pointed form of one of its ends, perhaps, make it doubtful whether it is really a weaver's smoothing-stone. It is represented in Fig. 103.†

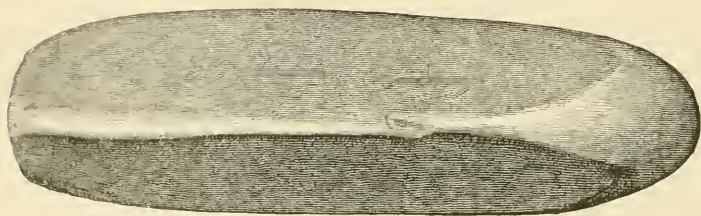


Fig. 103.—Smoothing-stone from Bathgate, Linlithgowshire; $3\frac{1}{2}$ inches long. Black-band iron-stone. Carefully shaped.

VERY few, if any, of the worked stones of which I have spoken can be properly called tools. None of them certainly can be called either cutting tools, or weapons of war, or implements of the chase. But we have recently found in Scotland a large number of worked stones of an extremely rude character, and their claim to be regarded as tools or implements is as good as that of the drift and cave flints,

* See "Proc. of Soc. of Antiq. of Scot.," New Series, vol. i., p. 280.

† Duns.—"Proc. of Soc. of Antiq. of Scot.," New Series, vol. i., pp. 280-281.

while their scientific importance may some day prove to be not much, if at all, inferior. To these worked stones I desire now, as briefly as possible, to direct attention. Many hundreds of them have been found—some hundreds by myself—and no doubt many more remain to be picked up. It is not necessary here either to tell of the history of their discovery or to describe minutely the character of the stones themselves. This has already been done elsewhere,* and I can trust to their form, size, and general character being sufficiently disclosed by the numerous figures I am able to give on pages 155 to 160 (Figs. 104*a* to 135). All I desire to do at present is to bring under notice such things regarding them as touch the aim of these lectures.

As yet, these rude worked stones have been chiefly found in one part of Scotland, namely, in Shetland, but a few have been discovered in Orkney and in St. Kilda. They have been found, however, not in one but in many parts of Shetland; and it is probably correct to say that they have always occurred in considerable numbers in every locality in Shetland in which they have appeared.

They have been usually picked up on the surface of the ground—that is, unburied—but they have also been found in the heart of a large tumulus, in a cairn, in association with curious underground structures, on the outside of short stone cists with urns in them, and in the inside of a kistvaen with a skeleton and well-polished stone celt. Specimens found in any such exceptional circumstances as these, however, are as yet but few in number. (See Figs. 109, 114, and 116.)

* They have been described in the "Proc. of Soc. of Antiq. of Scot.," vol. vii. and vol. viii., and in the "Mem. of the Anthropological Soc.," vol. ii.

They are nearly all made of sandstone—of greater or less coarseness and hardness in different specimens. A few are made of clay slate, also varying in quality. Still more rarely the material is a micaceous schist, and one, I think, is made of hornblendic rock.

They are, in the main, of an extremely rude character—as rude, I believe, as any stone implements which have ever been found anywhere in the world. But while this is true of them generally, it is also true that some of them show considerable finish. In the great majority the form is entirely due to a rough process of flaking. It is doubtful if any specimen has been found which shows polishing, or indications of an intention to polish, unless, perhaps, the knife-like implements (Figs. 134 and 135); but a considerable number of them appear to have been shaped and dressed by picking with an implement more or less pointed. I speak of finish as distinct from design, because the form of the rudest is as steady and clear as that of the better finished. It happens that only those of one form or type show a higher finish—those, to wit, which are more or less distinctly handled. All the handled specimens, however, do not show this better finish, some of them being as rude as any that have been discovered, and exhibiting the very same kind of rudeness. Perhaps one of the unhandled implements (Fig. 127), shaped entirely by flaking or chipping, may be said to show a certain taste in its design, and one two or of the handles (Fig. 123) may also be considered as exhibiting a certain effort at decoration: but with these exceptions none of the specimens we possess disclose any thought of beauty in the minds of their makers. It may happen, however, that well-finished and prettily-shaped specimens may yet be discovered.

Along with these implements have been found many well-known objects, such as sinkers, whorls, pounders, polished knives, a polished celt, an urn, etc.; but these appear among or with them so exceptionally as to render the intimacy of the association as yet somewhat uncertain. This at least, in the mean time, is the safe view to take.

Just as happens with the rude implements of the drift and caves, it is only in rare instances that these Shetland implements show marks which may be regarded as indications of their having been used, though the stone of which they are made is of such softness as to make use easily leave its trace. Perhaps in no instance can the signs of use be regarded as entirely beyond question. This is even true of the forms which are distinctly handled. I need not say that this is a point of interest, since what is true of these Shetland stones is similarly and equally true of the rude worked stones which have been found elsewhere in circumstances which have led to their being regarded as of vast antiquity.

The circumstances under which nearly all of these Shetland rude stone implements have been found are not such as to indicate any great age. They are just the circumstances, indeed, in which things of yesterday are found; and we can assign no reason for thinking them old, except the fact that a few of them have presented themselves in a seemingly true association with tumuli, stone cists, subterranean structures, and other things which are accepted as ancient.

If rudeness were an evidence of age, these stones might belong to what is called the early stone period. It is clear, however, that rudeness of itself is not a proof of great age, though it has often been used as if it were so in speculations as to the age of the implements found in the drift and else-

where. "It is true that perfect works are reached by a series of upward steps from imperfection; but it is true, also, that when new discoveries supplant an old art, in which great skill may have been attained, the old art often dies out by a process of degradation. Its higher productions are first ousted, and only its inferior ones continue to appear—growing less and less perfect as the skill needed for high-class work becomes lost and forgotten. Illustrations of this may at the present time be seen in those remote parts of our country which follow the general progress at a distance, and in which the native art and skill are sickened, but are not yet altogether extinguished, by the faint hold which the outside progress has obtained. It becomes at least possible, therefore, that the ruder forms of implements may both precede and follow the more finished forms, and that the overlapping of the so-called stone and metal periods may yield stone implements of as rude a character as the hand of man has ever fashioned. These Shetland stones may thus come to be a useful check on incautious conclusions, especially in those inquiries which relate to the condition and capacity of early man." It was thus I wrote in 1866, when I first brought



Fig. 104.—Rude Stone Implement from Shetland. Exceptional form. Weight, 2 pounds 5 ounces; length, $9\frac{1}{4}$ inches.

these rude Shetland implements under the notice of the Scottish Society of Antiquaries,* and one of my objects in these lectures is to establish the correctness of the views to which I then gave expression.

* "Proc. of Soc. of Antiq. of Scot.," vol. vii.



Fig. 104a.



Fig. 105.

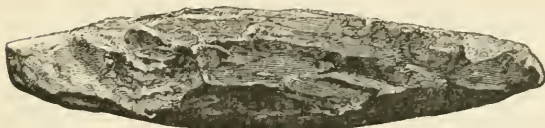


Fig. 106.

Stone Implements from Shetland, shaped by flaking. Fig. 104a weighs 14 pounds 12 ounces, and is 20 inches long. Fig. 105 weighs 7 pounds 3 ounces, and is 20½ inches long. Fig. 106 weighs 6 pounds 9 ounces, and is 19 inches long. This form is common.



Fig. 107.

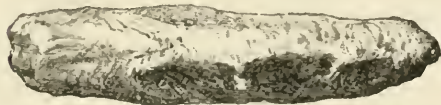


Fig. 108.

Stone Implements from Shetland, shaped by flaking. Fig. 107 weighs 2 pounds 3 ounces, and is 9½ inches long. Fig. 108 weighs 1 pound, and is 7¾ inches long. Common form. Many specimens of this form are small, not more than 3 or 4 inches long.



Fig. 109.

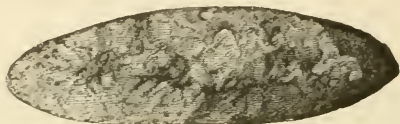


Fig. 110.

Stone Implements, showing a degree of rough pick-dressing. Fig. 109 was found close to the end of a short stone cist in a barrow in Orkney. It weighs 28 ounces, and is $11\frac{1}{4}$ inches long. Fig. 110 comes from Shetland, and weighs 52 ounces, and is $12\frac{3}{4}$ inches long. Form not uncommon.



Fig. 111.



Fig. 112.



Fig. 113.

Stone Implements from Shetland, shaped by flaking. Frequent form. Fig. 111 weighs 5 pounds 10 ounces, and is $14\frac{1}{2}$ inches long. Figs. 112 and 113 were very large, but their weights and length are not known. It is possible that Figs. 111 to 115 may be fragments of long implements.

RUDE STONE IMPLEMENTS FROM SHETLAND AND ORKNEY.

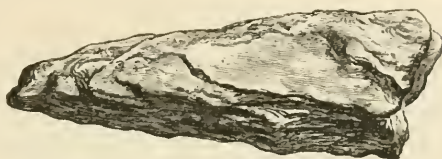


Fig. 114.



Fig. 115.

Stone Implements, shaped by flaking. Probably fragments. Frequent form. Fig. 114 was found at the end of a small cist in a barrow near the circle of Bookan, in Sandwick, Orkney. It weighs 2 pounds 9 ounces, and is $9\frac{1}{2}$ inches long. Fig. 115, from Shetland, weighs 2 pounds 2 ounces, and is 7 inches long.

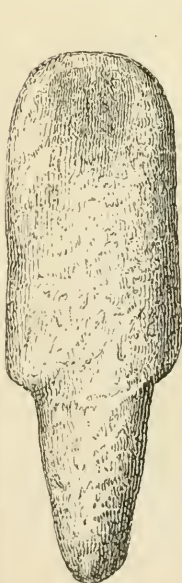


Fig. 116.



Fig. 117.



Fig. 118.



Fig. 119.

Handled Stone Implements from Shetland, roughly pick-dressed into shape. Fig. 116 was found in a tumulus in Bressay. Fig. 117 weighs 3 pounds 10 ounces, and is $11\frac{3}{4}$ inches long. Fig. 118 weighs 2 pounds 2 ounces, and is $9\frac{1}{2}$ inches long. Fig. 119 weighs 2 pounds 12 ounces, and is $6\frac{1}{2}$ inches long.



Fig. 120.



Fig. 121.

Handled Stone Implements from Shetland, shaped by flaking, and very rude. Fig. 120 weighs 18 ounces, and is $7\frac{1}{2}$ inches long. Fig. 121 weighs 4 pounds 12 ounces, and is 13 inches long.



Fig. 122.

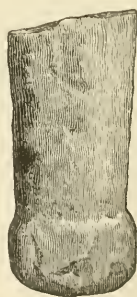


Fig. 123.

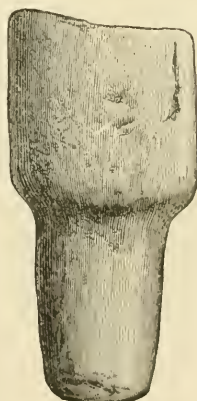


Fig. 124.

Fragments of Handled Stone Implements from Shetland. Such fragments are numerous.

RUDE STONE IMPLEMENTS FROM SHETLAND.



Fig. 125.

Club-like Stone Implement from Shetland, shaped by flaking, but showing some pick-dressing and smoothness at the small end. Weighs 6 pounds 10 ounces. $21\frac{1}{2}$ inches long.



Fig. 126.

Exceptional form of Stone Implement from Shetland, shaped by flaking, but showing some taste in design. Weighs 11 ounces. $7\frac{1}{4}$ inches long.



Fig. 127.

Spade-like Implement found in Shetland. Weighs 2 pounds 10 ounces. 12 inches long.

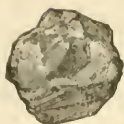


Fig. 128.

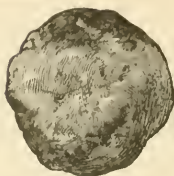


Fig. 129.

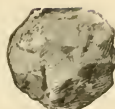


Fig. 130.

Spherical Stones from Shetland, found with other rude implements. Vary from about 3 to 6 inches in diameter. Shaped by flaking.



Fig. 131.

Pounder, found with rude stone implements in Shetland. Weighs 2 pounds 1 ounce.



Fig. 132.

Found with rude stone implements in Shetland. Not uncommon. Fig. 132 weighs 2 pounds 3 ounces, and is $5\frac{1}{2}$ inches long; and Fig. 133 weighs $1\frac{1}{2}$ pounds, and is 5 inches long.

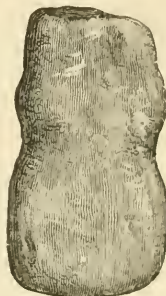


Fig. 133.

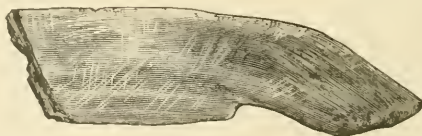


Fig. 134.



Fig. 135.

Fragments of Stone Knives found in Shetland. Form not uncommon. Thin, smooth, and well-dressed.

RUDE STONE IMPLEMENTS FROM SHETLAND.

LECTURE VI.

(4TH MAY, 1876.)

OLD CLOCK WEIGHT.—SUPERSTITIONS.—CARRYING FIRE ROUND HOUSES AND FIELDS.—YIRDING A QUIK COK.—SACRIFICING A BULL.—WORSHIPPING WELLS.—DRINKING WATER OUT OF THE SKULL OF A SUICIDE.—TASTING THE BLOOD OF A MURDERER.—THUNDER-BOLTS, ADDER-BEADS, AND ELF-DARTS.

IF I find an oblong stone weighing a few pounds, and having a hole through it at one end, and if I say that thousands and thousands of years ago it was fastened by a thong of hide to the end of a stick, and so formed into a sort of flail, to be used as a weapon of defence and aggression by the primeval man of these regions, when his development had made such small progress and his intellectual power was so low that he could contrive nothing better to protect himself or destroy his enemies—if I say all this of such a stone with a proper amount of *ex cathedra* confidence—I shall not be required, unless I am treated in a different way from that in which the tellers of such things have been generally treated, to show that I am stating conclusions that have been arrived at by the strict methods of inquiry which are followed in ordinary scientific research. I shall obtain a ready belief, and the stone will be handled and looked at reverentially, as a thing rendered half sacred by the halo of antiquity and mystery with which it is surrounded.

It would be almost cruel if some one followed with a demonstration that this marvellous stone was really a clock

weight, not more than 150 years old, and that the whole of my story about the flail and primeval man was nothing better than a pretty conceit.

Yet this, perhaps, is very much what I have been actually doing, or preparing the way for others to do. What else results from showing that some things are still in use among us which, without the knowledge of that fact, might be regarded as of great age and mysterious purpose; that other things will soon disappear from use, and may at no distant day be regarded as belonging to the remote ages, unless their story has been somewhere placed on the record; that others, again, which have but lately gone completely out of use, are already clothed in uncertainties; and that a century or a few centuries do more than we commonly think, and deserve more respect than they commonly get from the antiquary?

Up to this point, in dealing with my subject, I have made reference only to material or tangible objects; but customs and habits furnish illustrations equally good. They are very enduring, almost as enduring as stone, and many old ones survive among us, curiously obtruding the past into the present. As time rolls over them, their salencies are no doubt eaten off, and they lose their original form to a great extent; but there are generally some hard and tough projections which resist the tooth of the great eater, and remain to reveal something of their first shape. The story of many of them, indeed, has been more or less successfully read by the aid of these small and seemingly unimportant characters. To some of those, which have been so studied, I have now to allude. Most of them are of the nature of what we call superstitions; by which I mean that there is something of the supernatural about them, or that in some way or other they are associated with religious beliefs and practices.

THERE are some superstitions which may be true relics of old pagan beliefs, or merely an outcome of beliefs which, though not Christian, need not be either old or pagan in the ordinary acceptation of that word. A practice, for instance, founded on a belief in the efficacy of doing something to propitiate a superhuman source of misfortune and evil is not necessarily pre-Christian and pagan. It may spring up, in a community professing Christianity, as the outcome simply of man's mental constitution. A superstitious practice with this origin may acquire power and fixity, especially over the ignorant, who in such matters form a wider class than they do in ordinary matters.

The carrying of fire round houses, fields, boats, etc., on the last night of the year, is a custom which still prevails in some parts of Scotland, and I think we can have little doubt as to its pagan and pre-Christian character. It is intended to secure fertility and general prosperity, and it is probably a survival of some form of fire-worship. Those who practise it are no doubt quite unaware of its having such an origin. To the vast majority of them, indeed, the ceremony is little more than a meaningless frolic—a thing in the value and efficacy of which there is no real faith. At the same time, I know I am correct in saying that many of the very people who do not avow faith in the ceremony—who, indeed, have no faith in it—could not suddenly neglect it without a certain nameless feeling of uneasiness and apprehension.

There are remarkable superstitious practices, however, still common among us, and unquestionably of pagan origin, about the people's faith in which there can be no doubt. Whenever we encounter living superstitions of this kind, it is found that they are spoken of unwillingly, and that they are practised with more or less of secrecy. One such superstitious practice it has probably fallen to me to encounter

with greater frequency than to most men. I refer to the burying of a live cock for the cure of epilepsy. This is a cruel and barbarous thing, but it is much more than that—it is a sacrifice deliberately and consciously offered in order to propitiate a supernatural power, and effect the expulsion of the demon which is believed to have possession of the unfortunate epileptic. The ceremonies which attend the sacrifice leave little doubt as to its origin, or as to its past and present significance. It is nearly always gone about in a secret and solemn manner—in such a way as will best tend to secure its important object. A special superhuman agency, who is not the God of Christians, is acknowledged and appealed to, and an effort is made to avert his malevolence. The whole idea and procedure are as truly heathenish as anything to be found among the savage nations of the world. Nor is this unfelt by most of those who practise the rite. They show their consciousness of it in a reluctance to tell of what they have done, and in the secrecy which they observe. This secrecy, and this reluctance to speak freely, testify also to the reality of their faith, though nothing, perhaps, is needed to show this beyond the act itself. When persons are charged with taking part in the rite, and when its nature is honestly and roughly exposed, I have often been struck with the embarrassment which resulted from the struggle between a desire to disown all faith in it, and a fear of evil from so doing.

It would be a great mistake to suppose that the persons referred to are the grossly ignorant, and a still greater mistake to suppose that they are the irreligious. On the contrary, they are often church-attending, sacrament-observing, and tolerably well-educated people—people, too, who necessarily participate in all the advantages of the advanced civilization of their country.

What I wish to be understood is that such a thing as this cruel and heathenish sacrifice of the cock can occur among a people thus favorably constituted and circumstanced, and

that it is not necessary for a nation, as a whole, to consist of the uncultured and incapable because many persons belonging to it may exhibit certain aspects of savagery. High civilizations do not represent plateaus, on which all who participate in them stand at the same level of capacity and enlightenment; nor do the products of such civilizations ever show a complete harmony and freedom from inconsistency. The few men of a nation who reach a high level of culture, no doubt give the direction and the color to its state of civilization; and all derive advantages from this, although as individuals many of them may be as uncultured and as incapable of culture as if they belonged to a nation in a state of savagery.

I have called this “yirding of a quik cok” a sacrifice; and those, perhaps, who have not much looked into such matters may think this a large way of describing a small business. No such feeling, however, can find a place in the mind of any one as regards the superstition of which I am now about to speak, and which involves the formal sacrifice of an animal of great size and considerable pecuniary value.

Less than two hundred years ago it was customary, in the group of parishes which surrounded Applecross, to sacrifice a bull on a particular day of the year—the 25th of August—that is, the day of St. Mourie, who is the well-known patron saint of Applecross, and who was, and is to this day, sometimes spoken of in the district as the God Mourie. So truly was this sacrifice a practice of the people, that the Presbytery of Dingwall had frequent occasion to deal with it in a serious manner. The sacrifice was usually, but not always, offered in the island of St. Ruffus, or Innis Maree, where the saint had a cell, and where, before his coming to Scotland, tradition says there was a peculiarly sacred temple of the pagans. Assuming the correctness of the tradition, the special reputation of this island for sanctity would not

be lost to it after it was Christianized. Many of the old heathen rites and ceremonies would almost certainly be imported into the new religion. As little violence as possible would be done to the old faith. The god, or demon of the place, whom men had been accustomed to worship there, and to whom sacrifices were wont to be offered, would be eventually replaced in the eyes of the people by the missionary saint. This change would begin to show itself with special strength after his death. During his life he might tolerate and perhaps even take some part in the pagan ceremonies, though he would, no doubt, endeavor to give them a Christian aspect. After his death these ceremonies would be continued, and would tend to assume the character of a worship of the saint himself. All this is at least probable. In the early history of Christianity in this country such things assuredly happened. We know that it was so from documents like the famous letter of Pope Gregory to Melitus, and the letter of Pope Zachary to Boniface, and also from the study of sacrificial ceremonies like that at Applecross, in which other saints are concerned, as, for instance, St. Beyno, St. Cuthbert, and St. Edmund. These things have been carefully examined and discussed, and I am not aware that any one will dispute the general views which I now enunciate. Their importance lies in this, that they show the continuance, among a people long Christianized, of ceremonies and practices emphatically pagan—not keeping their ground, or cropping up in spite of Christianity and as its enemy, but carried forward and onward with it.

Though it occurs in a Christian land and in quite recent times, it would be difficult, I imagine, to find in any land a religious ceremonial more heathenish than the sacrifice of a bull to a local deity; but the heathenishness of the practice in Innis Maree is made even more clear by some things which we learn from the Presbytery records. We are told

there that there were monuments of idolatry in the island, and stones which were consulted as to future events; that the people gave adoration to wells, and poured milk upon the hills as oblations; and that there were certain "poor ones," called "Mourie, his devilans, and owning the title," who received the sacrifices offered to him. We are surely entitled to ask what things are done by the heathen more foolish, more degraded, or more idolatrous than these things? Yet they were not done by heathens, but by people who had enjoyed, for a thousand years and more, the blessings of that religion which, beyond all other agencies, has proved the greatest civilizer of mankind.

It is not, however, in large acts like this sacrifice of a bull, which force themselves on public notice, and which cannot be quietly and secretly performed, that we find among us the best evidence of survivals of paganism.

One of the things which the Presbytery of Dingwall deplored and sought to suppress was the adoration of wells. Now, in certain aspects, this adoration of wells continues largely to our day. It may be encountered in all parts of Scotland from John o' Groat's to the Mull of Galloway. Even the very well on Innis Maree, which the Dingwall Presbytery had prominently in view at their meeting on the 5th of September, 1656, still receives adoration. When I visited it, some fifteen years ago, I found numerous offerings fastened to the tree which stands beside it. The bush above Craigueck well, in the parish of Avoch, was covered with rags when I was there; and I have seen at least a dozen wells in Scotland which have not ceased to be worshipped.

It is quite possible, perhaps certain, that some people visit these wells out of frolic. Many years ago we know it was

customary for crowds to go to them on the 1st of May, and merriment then followed as a matter of course. Religious pilgrimages, indeed, have not unfrequently that ending; but nowadays the visitors are comparatively few, and those who go are generally in earnest. They have a serious object which they desire to attain. That object is usually the restoration to health of some poor little child—some “back-gane bairn.” Indeed, the cure of sick children is a special virtue of many of these wells. Anxious mothers make long journeys to some well of fame, and early in the morning of the 1st of May bathe the little invalid in its waters, then drop an offering into them by the hands of the child—usually a pebble, but sometimes a coin—and attach a bit of the child’s dress to a bush or tree growing by the side of the well. The rags we see fastened to such bushes have often manifestly been torn from the dresses of young children. Part of a bib or little pinafore tells the sad story of a sorrowing mother and a suffering child, and makes the heart grieve that nothing better than a visit to one of these wells had been found to relieve the sorrow and remove the suffering.

One feature of visits paid to these wells in a spirit of faith and earnestness, as visits like those I speak of are sure to be, is that they are kept more or less secret. It is well enough understood that the business is not a Christian one, and that the engaging in it is not a thing which it would be easy to justify. There is a consciousness that it has not been gone about as an empty, meaningless ceremony, but that it has involved an acknowledgment of a supernatural power, controlling human affairs and influenced by certain rites and offerings—a power different from that which is acknowledged by Christians. Hence it happens that there is a difficulty in getting people to confess to these visits, and of course a greater difficulty still in getting them to speak

freely and frankly about the feelings and beliefs which led to them.

Some of these wells have the names of Christian saints attached to them, but I never knew a case in which there was any prayer or appeal to the saint. Many of these wells were objects of adoration before the Christianizing of the country. The early missionaries, by taking them over as fountains of regeneration, believed themselves to be doing wisely in trying to give a new direction to the respect paid to them. Their success, however, does not seem to have been complete and lasting.

It would be easy to find many superstitious customs which appear to be survivals of paganism, like the three of which I have spoken, namely, the burial of living cocks, the sacrifice of bulls, and the adoration of wells; but it appears to me I have given enough for my present purpose.

It seems almost incredible that people surrounded by so much enlightenment can go on acknowledging the existence and power of a multitude of gods, and putting faith in the value of these silly ceremonies. There are two ways, however, of looking at matters of this kind, and one of these ways—the less generally taken—I desire briefly to speak of, because it must present itself whenever we attempt to determine the condition of early man from a study of the condition of existing man, as he presents himself in low states of civilization—that is, as a barbarian or savage.

Bacon says “the master of superstition is the people,” and probably the master of the people is ignorance. But we should make a great error if we supposed that only the ignorant are superstitious. Is it going too far to ask if there are any persons, even among the most capable and cultured, who are not, in different ways and degrees, the

slaves of superstitious feelings? The love of the mysterious and supernatural is a part of human nature. A sound education and good understanding may control but cannot destroy it. Marx was right when he said, in his quaint letter to Petrus de Apono, that "superstition is so firmly embedded in human nature that a phrenologist might discover an organ for it." I do not mean to imply that the soundly educated would indulge in such extravagances as those I have been speaking about. It may be true that they would not, and yet it may be true that their conduct is shaped, that their feelings are moved, and that their hopes and fears are influenced in smaller ways by smaller things, which have a real hold on their minds, and which differ only in degree from more pronounced superstitious beliefs and practices.

In the study of superstitions, especially when these constitute a whole religion, as we practically hold them to do in the case of savages, we should never lose recollection of the mote in our own eye when we contemplate with amazement the beam in that of our savage brother, nor of the remnant still within the best of us of the so-called primeval man.

There is still another point of view from which we should not neglect to look upon superstitions. When we hear of people pinning rags on bushes at wells, burying cocks, sacrificing bulls, or pouring oblations on hills, and seriously expecting from such procedures to get some good or avert some evil, we wonder how sane minds can be so weak and foolish, and we account for it by supposing them to be of low power and culture. In this way we readily and naturally explain the occurrence of these things among ourselves; and we become strong in the assertion of such an explanation whenever it concerns the occurrence of similar

things in lands still peopled by savages. Their false beliefs and foolish practices are at once accepted as the evidence and outcome of feeble and uncultivated intellectual powers. We are right in this, yet not wholly right. The view needs some qualification. It implies a forgetfulness of the fact that, as a mere intellectual effort, the acceptance of all that is involved in the accepting of Christianity is not much less difficult—if it be in any degree less difficult—than the acceptance of many heathen beliefs. I shall not be misunderstood when I say this. I speak, of course, of the mere intellectual effort, and I refer both to the dogmas and ceremonies of our faith—to the doctrines and ordinances of the Christian religion, which can only be received and observed through faith. The conclusion I draw is this: We have no right to infer from a man's being a heathen—whether his religion be richly loaded with ceremony and refinement, or be vulgar, coarse, and cruel; whether it be elaborated and complete, or as mean as the simplest fetich-worship—that that man is necessarily inferior in intellectual power to him who has received the truer and higher religion in which all our hopes are grounded. We have no right to conclude this, any more than we have a right to conclude that a man who goes to the chase or to war with a stone celt and a flint-tipped arrow is necessarily inferior to the man who carries a steel sword and a rifle. I am talking now of intellectual capacity and not of culture; and I endeavor to teach a lesson of caution, humility, and honesty in dealing with the condition of people who are still in a state of darkness and savagery—a state from which we erroneously think ourselves infinitely remote.

Most of the religious beliefs among us, which have the character of what we call superstitions, have a tendency to acknowledge malevolence rather than benevolence in the powers worshipped, and they also tend to make those pow-

ers local deities, that is, gods of particular places and particular people. In this they show a further alliance to pagan beliefs—not perhaps to all of them, but certainly to all the lower and more degraded and to some of the higher.

I once talked over the subject of well-worship with an intelligent man, who was, in the opinion of his neighbors, a good Christian, but who nevertheless had shown a practical faith in the virtues of these wells by resorting to them when in sore trouble, and duly practising the necessary rites and ceremonies. When I pointed out that the localizing of the power he had appealed to showed a kinship between the superstition and the religious belief of many paganisms, he reminded me that the religion of the Jews was exclusive in its character, and that their God had chosen them for a peculiar people, and dwelt in a special manner in Jerusalem. It thus appears that the persons who still “pay adoration to wells” are not necessarily either stupid or uninformed.

THERE is another class of superstitions which are of great interest, and require notice here. They exhibit little beyond an extreme credulity, and can scarcely be regarded as allied to religious beliefs. They are generally childish and silly, but many of them are also coarse and repulsive.

A good example of a disgusting superstition of this kind is the belief that epilepsy may be cured by drinking water out of the skull of a suicide, or by tasting the blood of a murderer. I have known epileptics so treated.

Such superstitions cannot be called rare among us. There are not many, perhaps, of so startling and offensive a character as the one I have named; but there are not a few of a character sufficiently coarse and repulsive to make it difficult to believe in their existence, except among the grossly ignorant and uncultured. It is well known, however, that

the credulity on which these disgusting and stupid beliefs are founded comes considerably higher up than the lowest stratum of society. This is so certain that it needs no proof; but it suggests the question, What is the lowest stratum of society, and what is its thickness?

We talk of ourselves in lump as a people highly civilized, but what does that imply? Does it simply mean that all persons in the country are members of a community which is in a state of high civilization? If it means nothing more than this, we talk of ourselves correctly as being in the mass highly civilized, because civilization is an attribute of the aggregate, and must affect all who go to form the aggregate. But do we not confound civilization with culture; and, when we talk thus broadly of ourselves as a people highly civilized, do we not really imply and mean that the civilized aggregate, of which we are members, is an aggregate of cultured individuals? No such aggregate, however, is known to exist, nor is its existence conceivable; and we certainly cannot correctly talk of ourselves as being in the mass a people highly cultured. In point of fact, our high culture does not embrace the millions, but is confined to the thousands. It would no doubt embrace every one if the test of culture were to be found in the mere *use* of such things as fabrics from power-looms, steam-engines for locomotion, and electricity for the interchange of thought. These things are, of course, the outcome of culture, but what have the millions to do with their existence? They are not the products of a culture personal to them. The millions, as a result of the state of civilization in which they live, use and benefit by these and many other such things. But what part did they play in calling them into existence, and how would it fare with the prospects of their continuance if the upper ten thousands died suddenly out?

This subject will be more fully examined in the lectures on civilization. In the mean time I have said enough to

show that what we call the lower stratum of society has a depth which is very great.

I conclude this lecture with a short reference to another interesting class of superstitions.

Most persons know what I refer to when I speak of stone axes or celts, but it may not be so generally known that in every part of Scotland these ancient tools or weapons are now treated by the people as possessed of a power to keep away misfortune and cure disease. It is believed, for instance, that they assist the birth of children; that they increase the milk of cows; that they cure the diseases of the eye; that they protect the houses in which they are kept from lightning; and that they have many other such marvellous virtues. Hence it happens that a stone celt is sometimes preserved in a house with reverential care, passing down through generations from father to son. By those who so preserve them they are called thunder-bolts, and it is believed that, as they have a sort of supernatural origin, they may reasonably be supposed to have supernatural powers.

It has been concluded that the period when stone celts were in actual use in the countries in which they are now regarded as thunder-bolts must have been very remote, because a long time would be needed to invest what were once "the common implements of every-day life with a superstitious reverence," and to lead to their being treated as "in some sense of celestial origin, and not the work of man's hands." But is this conclusion necessarily correct? Does the growth of a superstition round such objects always prove their great antiquity? In the case of the whorl, for instance, have we not found that less than a single century was needed to transform it into an adder-bead and an amu-

let? Why, then, should we require ages to do that for a celt which a century can do for a whorl? It is possible that it may have taken ages to do it; but ages were certainly not necessary.

How the stone celt came to be called a thunder-bolt we can only guess. It would be nothing very remarkable, however, to find such a name given to it in some one part of Scotland, or even over Scotland broadly; but it becomes very remarkable when we find it given not in Scotland only, nor even in Scotland, England, and Ireland, but also in France, the Channel Islands, Norway, Sweden, Germany, Holland, Portugal, Italy, Brazil, Japan, Java, Burmah, Assam, among the Malays, in Western Africa, and in many other countries. In all these places it carries the same or a similar name, and a like dress of superstition. The diffusion of such a belief over the face of the globe becomes more interesting and significant when we find that other superstitions, very closely allied to the one of which I am speaking, show nearly as wide a diffusion. The whorl, for instance, becomes a snake-stone or adder-bead, and is clothed with supernatural power in Scotland, England, Ireland, and other countries. And a still better illustration is furnished by the stone arrow-head, which becomes the elf-bolt or fairy-shot all over Great Britain, and also in Italy, Norway, Sweden, and many other countries, and is believed, like the thunder-bolt, to have the power of averting misfortune and curing disease.

Why such objects should, in any country, be clothed with superstition is a puzzle: it is more puzzling why, in so many countries, the same pattern should be given to the clothing, but more puzzling still why these countries should be the more advanced countries of the world. A stone celt could scarcely be deified by a man in his stone age. He knows what it was made for, and who made it. But this in no

way lessens the difficulty of understanding why the iron-age man, who has presumably a higher culture, should regard as of celestial origin, and give a god-like power to, things which are so evidently manufactured by man.

Sir James Simpson has described many remarkable curing or charm stones, which have been passed down from generation

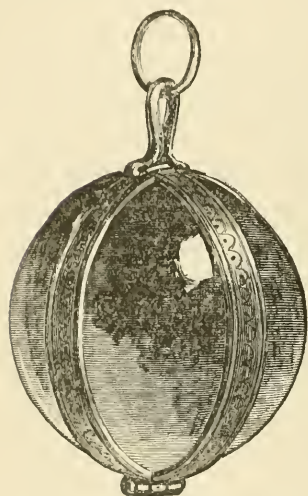


Fig. 136.—Clach Dearg, or Stone of Ardvoirloch.

to generation in Highland families, and which are still, or very lately were, believed to possess supernatural powers. Not the least famous of these is the *Clach Dearg*, or Stone of Ardvoirloch, a ball of clear rock crystal, placed in a setting of four silver bands. This stone is represented in Fig. 136. One of the members of the ancient family of Ardvoirloch, writing to Sir James in 1860 or 1861, says that the stone is supposed to have been brought from the East, and this is rendered probable by the character of the silver work. Its

healing powers have long been held in great repute, particularly in diseases of cattle; and Sir James Simpson's correspondent says, "I have known persons come for the water into which it has been dipped from a distance of forty miles." It appears "that there were various *forms* to be observed by the person who wished to benefit by its healing powers. He was obliged, for instance, to draw the water himself, and bring it into the house in some vessel into which the stone was to be dipped. A bottle was filled and carried away; and in its conveyance home, if taken into any house by the way, the virtue was supposed to leave the wa-

ter; it was therefore necessary, if a visit had to be paid, that the bottle should be left outside.”*

The people who come under the sway of such superstitions as those I am now describing are by no means necessarily the ignorant and uncultured. Did not the inhabitants of the town of Newcastle, when the plague visited it in the reign of Charles I., send to Scotland for the loan of the Lee Penny? They granted a bond of £6000 for its safe return; and did they not offer to forfeit the money if allowed to keep it? This Lee Penny is an Oriental charm—a small, dark-red stone, of a triangular or heart shape, set in the reverse of a groat of Edward IV. of the London Mint, and it has a world-wide reputation. The Glasgow Synod of the Presbyterian Church once examined into its alleged curative gifts; but finding that it was employed “without using onie words such as charmers and sorcerers use in their unlawfull practisess; and considering that in nature there are mony things seen to work strange effects, whereof no human witt can give a reason, it having pleasit God to give to stones and herbes special virtues for the healing of mony infirmities in man and beast, advises the brethren to surrease their process, as wherein they perceive no ground of offence: and admonishes the said Laird of Lee, in the using of the said stone, to tak heed that it be used hereafter with the least scandal that possiblie may be.”†

They were not the ignorant of the country who thus gave the Lee Penny their countenance. Were they not rather the foremost among the cultured of their time?

In the middle of the seventeenth century the Reformed Presbyterian Church of Scotland zealously endeavored to extinguish well-worshippings, and the vain practices which

* Simpson, “Proc. of Soc. of Antiq. of Scot.,” vol. iv., pp. 220, 221.

† Ibid., p. 224.

are carried on with spells, and trees, and stones; but they left other superstitious practices untouched. Thus, while they threatened "the seventh son of a woman" with the "paine of the kirk censure" for "curing the cruelles" by touching them, they still allowed the reigning king this miraculous power. The English Church even sanctioned a liturgy to be used on the occasions of his exercising it;* and we are told that Charles I., when he visited Scotland in 1633, "heallit 100 persons of the cruelles, or king's civell, yong and olde,"† in Holyrood Chapel on St. John's day.

If I go to the history of witch burning in Scotland, shall I not find countless illustrations, stronger far than those I have given, of the sway of barbarous and cruel superstitions over the learned and the pious; and do I ask a foolish question when I ask if that sway is, or ever will be, altogether at an end?

* Simpson, *op. cit.*, vol. iv., p. 224.

† Dalrymple's "Darker Superstitions," p. 62.

PART II.

WHAT IS CIVILIZATION?

LECTURE I.

(17TH OCTOBER, 1878.)

1. WHAT IS CIVILIZATION?—2. HOW DOES THE LAW OF
NATURAL SELECTION AFFECT MAN?

1. What is Civilization?

BANCROFT says it sometimes happens that “to things we do not understand we give names, with which by frequent use we become familiar, and then we fancy that we know all about the things themselves.”* It stands thus, I think, with the term Civilization. We use it familiarly, as a word well understood; but, in reality, we do not attach to it any precise meaning. Both general talk about it, and reference to books which treat of it, show that our views as to its nature are very indefinite.

It is clearly of importance, however, that archaeologists should have an exact understanding of what is meant by civilization, so that confusion may be avoided in what is said about the condition of early man; and it appears to me that I am required, as it were, by the way in which I have discussed the appearances of the past in the present, to make an attempt here to disclose what I regard as the true nature and origin of civilization.

I think I shall best attain this end if I begin by showing how the Law of Natural Selection operates in the case of

* Bancroft, “The Native Races of the Pacific States of North America,” vol. ii., p. 5.

man. In doing this, I shall, to a large extent, adopt the views and follow the reasoning of Mr. Alfred R. Wallace, though my ultimate conclusions differ from those which he has reached.*

2. How does the Law of Natural Selection affect Man?

I shall endeavor to answer this question with as much brevity as possible; and, in doing so, I shall express no opinion as to the way in which the law operates in regard to other animals.

EVERY animal varies in its offspring. Some are feeble as compared with others. Some are even imperfect or deformed. Some have such a low vitality that they die soon after birth; while others, for reasons which are the same in their nature, are dead at birth. Some, on the other hand, are remarkable for strength and perfection. These differences, which it is unnecessary further to illustrate, occur in the offspring of all animals, man included.

It is also the fate of all animals that they shall have what is called a struggle for existence. They have, for example, to search for food, and that search always involves labor, and often involves fatigue and danger. They have enemies to flee from, and they have to provide shelters, both to protect themselves against the inclemencies of weather and to enable them to rear their offspring.

This struggle for existence differs, perhaps, in its severity in the cases of different kinds of animals; but it happens to

* See "Journal of Anthropol. Society," vol. ii., p. 158. Some quotations given in the Appendix show my obligations to Mr. Wallace, and are intended, at the same time, to disclose his opinions more fully.

all animals, man again included, as universally as does that variety of vigor in the offspring to which I have just referred.

It is the necessary outcome of this struggle, and of this variety in the offspring, taken together, that those animals which are best fitted to live have the best chance of living, and that those which are the least fitted to live are the most likely to die early.

Each animal species is thus subject to a natural selection, having as its result the survival of the strong and fit, and the destruction of the weak and imperfect. To suppose it otherwise would involve the assumption that strong, healthy, and well-organized animals have no advantage over the weak, the unhealthy, and the imperfectly organized—a supposition which is opposed to daily observation.

But though these varieties occur in the offspring of all animals, it is nevertheless true that in the general characteristics of the offspring there is always a resemblance to the parents; and it is clear that this resemblance must be closer between parents and the strong members of their progeny than between parents and the weak members, because the parents themselves are among the survivals of the fittest—that is, they had strength to survive to be parents and did not die off with the weak.

The stronger members of a stock, and not the weaker, are, as a rule, those which live to beget offspring; and the stronger members of the progeny must, therefore, as a rule, resemble the parents more closely than the weaker. It is evident, indeed, that resemblance must show itself between strength and strength, and not between strength and weakness.

In this way it happens that natural selection, in the struggle for existence, tends to keep up a good average level in

the quality of the stock; or, as Mr. Wallace puts it, "keeps all up to a pretty uniform standard,"* and thus operates to prevent the intensification of varieties, and to perpetuate species. The physical form and constitution of the animal are thus kept in harmony with its environments, and it does not lose its fitness to perpetuate itself in the circumstances in which it is placed.†

No one, I imagine, goes farther than this with the work of natural selection, till it is assumed that the surroundings in which animals live are, and have ever been, liable to great and continuous changes, which give new characters and conditions to the struggle for existence, and call into special play powers of the animal which in other conditions had been little used or needed. This, it is held, may lead, in the long run, to structural changes, and in that way to the formation of new species. For the moment, however, it is not necessary for me to treat Natural Selection as more than a perpetuator and maintainer of species. While we keep to that, we are in the region of observed fact. When we go farther, I think I may correctly say that we are in the region of theory.

That Natural Selection acts strongly on the life-history of animals is beyond question; and Mr. Wallace points out "that its effect depends mainly upon their self-dependence and individual isolation. A slight injury, a temporary illness, will often end in death, because it leaves the individual powerless against its enemies. If an herbivorous animal is a little sick, and has not fed well for a day or two, and the herd is then pursued by a beast of prey, the poor invalid inevitably falls a victim. So in a carnivorous animal, the least deficiency of vigor prevents its capturing food, and it soon dies of starvation. There is, as a general rule (among

* Wallace, *op. cit.*, p. clxii.

† *Ibid.*, p. clxv.

the brutes), no mutual assistance between adults which enables them to tide over a period of sickness; neither is there any division of labor; each must fulfil all the conditions of its existence.”*

So long as man stands in isolation he must be subject to this law, exactly like other animals. But, in actual fact, we have no knowledge of man living in that state of “self-dependence and individual isolation” in which we find other animals living. So far as we know, man has always and everywhere combined with man to defeat the law. The combinations may be weak and small; but he never stands quite alone, and has never to fulfil all the conditions of his existence. The most distinguished advocates of evolution, I think, admit this. Mr. Wallace, for instance, says that, “in the rudest tribes the sick are assisted at least with food; less robust health and vigor than the average does not entail death. Neither does the want of perfect limbs or other organs produce the same effects as among animals. Some division of labor takes place; the swiftest hunt, the less active fish or gather fruits; food is to some extent exchanged or divided. The action of natural selection is therefore checked; the weaker, the dwarfish, those of less active limbs or less piercing eyesight, do not suffer the extreme penalty which falls upon animals so defective.”†

But more than this is true. The advantage or victory which man gains for himself gives him a directing influence over other existences. He not only defeats the operation of the law of natural selection as regards himself, but in the very accomplishment of this he takes away, in the case of other living things, some of that power from nature which, apart from his interference, she universally exercises. He

* Wallace, *op. cit.*, p. clxii.

† *Ibid.*, p. clxii.

does this, for instance, when he cultivates plants and domesticates animals. He introduces these living things, as it were, into the associations which he forms, and substitutes in regard to them man's selection for natural selection.

It thus appears that the law which inexorably destroys all animals "that cannot in every respect help themselves" is set aside in the case of man, as the result of co-operation and the division of labor. In other words, the defeat of the law is attained by man in society, and is not attained by man acting singly or in isolation.

Societies or unions for such a purpose are the result of man's superior intelligence, but no intellectual power which he has ever displayed would be sufficient for the purpose without combination.

It is not, however, as the direct and immediate result of their moral nature that men act in concert for protection, and for the acquisition of food and shelter; that the weak and helpless among them are not left to perish; that the sick and wounded receive assistance; that the game of the successful hunter is shared with the less successful, or exchanged for weapons which even the sick or the deformed can fashion;* that the property of each is protected by all; that those fitted for special occupations can follow them with a result which averts the fate otherwise consequent on the neglect of a search for game and roots. It is not as the direct and immediate result of their moral nature that such things as these happen among men; they combine to make war with nature—to resist and defeat a natural law—and these things are at once the weapons with which the victory is gained and the fruits of the victory. In isolation man is

* Wallace, *op. cit.*, pp. clxii., clxviii.

even more helpless to resist this law of Nature than other animals; but he becomes strong in proportion to the strength of the associations which self-interest prompts him, and nature fits him to form. He has been well described as "a being apart, since he is not influenced by the great laws which irresistibly modify all other organic beings."* He succeeds in escaping that influence in consequence of the possession of what we call mind. Yet mere knowledge would not suffice—the mere knowledge, for instance, of the use of metals, and of the way to fashion out of them weapons for the chase or war, or tools for use in agriculture or the arts. Before this law of Nature can be controlled he must form associations to use these weapons and tools in the accomplishment of works which are only possible to united efforts.

Man individually is an organism—a bundle of organs—each organ useful, and together forming a complete whole. In like manner a human association is an organism—the different members forming the bundle of organs—each having a separate and useful function, and together forming a complete and powerful whole. Just as the individual man has eyes, ears, hands, legs, etc., so a human association has organs to make war or hunt, to fabricate weapons, to cultivate the soil, to herd the flocks—soldiers, farmers, carpenters, blacksmiths, house-builders, hatters, etc., all the way down to the makers of pin-heads and pin-points. In this way the variously constituted find places of usefulness. The association, indeed, cultivates actively different qualifications in its different members, and so develops them into such organs as are needed to give vigor to the organism as a whole. Individually, no doubt, each man is thus rendered more powerless than he naturally is to struggle for existence, but the association gains in strength. The man who

* Wallace, *op. cit.*, p. clxviii.

devotes his life to giving eyes to needles may do so to the advantage of the association of which he is a member, but he certainly does not, by the acquisition and exercise of such a special expertness, increase his own fitness to encounter the struggle for existence if he stood alone. He becomes a mere organ of an organism, but as such he both draws strength from and gives strength to the organism.

When the cripple who can see mounts the strong back of his brother who is blind, they make together a man who can see and walk, and so they can both accomplish the journey which to each separately is impossible. In this little society of two we see that happening, in a small and simple way, which presents itself, with much complication, in large associations of men.

By no amount of culture or intellectual force can an isolated man overcome the destroying effects of the great law of natural selection. But he knows that in association with his fellows he can disarm the destroyer, and he forms associations accordingly. Not as an individual, but in society, he undertakes this noble work, using to that end the wonderful attributes with which we find him endowed in every state in which we have yet known him. In this aspect of dignity the matter presents itself to me; but I do not fail to perceive that it may have another aspect to some. Since it refers to a war with the laws of Nature, the work may be regarded rather as evil than good in its character; and such a view will not be found to be entirely without support, when we examine the roads which are travelled to reach the end, and find them paved with selfishness, cruelty, and other vices. That the end is the thing we call civilization it will be my endeavor to show in what follows, though it almost appears to me that I have already said enough to show that *civilization is nothing more than a complicated outcome of a war waged with Nature by man in Society to prevent her*

from putting into execution in his case her law of Natural Selection. All men—everywhere and in all stages of progress—from states of very low to states of very high civilization—are banded together, weakly or powerfully, to fight this fight, and *the measure of success which attends the struggle of each band or association so engaged is the measure of the civilization it has attained.*

I thus indicate on the threshold the view I take of the nature and origin of civilization. So far as I know, it is a view which has not previously been formulated. I have more, however, to say toward the elucidation and establishment of the position I take. I have something more, for instance, to say about man and his relation to the law of Natural Selection.

IN the way I have indicated man is able to keep himself in harmony with his environments. So far as he is concerned, there can be no change of physical structure as the result of natural selection. This is the conclusion, I think, which is reached by such evolutionists as Mr. Wallace. I am referring now to those slow developmental results which are held to attend the operation of this law, and which, in a sentence or two, I shall explain as nearly as may be in the words of Mr. Wallace. It is alleged, for instance, that “when any slow changes of physical geography or of climate make it necessary for an animal to alter its food, its clothing, or its weapons, it can only do so by a corresponding change in its own bodily structure and internal organization. If a larger or more powerful beast is to be captured and devoured, as when a carnivorous animal which has hitherto preyed on sheep is obliged, from their decreasing number, to attack buffaloes, it is only the strongest which can hold—those with most powerful claws and formidable canine teeth that can struggle with and overcome such an

animal. Natural selection immediately comes into play, and by its action these organs gradually become adapted to their new requirements.”* Those individuals which have them survive to propagate, and the peculiarities are transmitted to their offspring. Thus it is said a new animal may come into existence with a new structure; and through slow changes of this nature, continued over ages, a new species may be evolved.

Be this as it may in regard to other animals, nothing of the kind happens in the case of man. “Under similar circumstances he does not acquire longer nails or teeth, greater bodily strength or swiftness. He makes sharper spears or a better bow, or he constructs a cunning pit-fall [or he invents the gun], or he combines in a hunting-party to circumvent his new prey.”† There is nothing, therefore, in what man does—when his environments change—to bring about any alteration in the form or structure of his body. So far as that is concerned, he remains stationary; and he must have remained stationary, in his physical structure, ever since he had those powers of mind which enable him to resist the ordinary operation of this law, and therefore ever since his origin, if at his origin he was thus endowed.

In assigning this exceptional position to man, and holding that, as the consequence of it, his physical structure does and can undergo no change, I am only doing what has been done by such an evolutionist as Mr. Wallace. I have already shown that he holds this opinion; but he maintains that man is nevertheless subject to this law, the results being manifested in a different way. Though man's bodily form and structure may escape the operation of natural selection, he thinks that the capacities which enable him to do such things as those which have been referred to—namely,

* Wallace, *op. cit.*, p. clxii.

† *Ibid.*, p. clxiii.

to form combinations, build houses, manufacture clothing, plant seeds, domesticate animals, etc.—are modified by natural selection. In other words, in the case of man, the fitness which leads to survival is held to show itself in mental and not in bodily qualities. The weak-bodied may practically have equal advantages with the strong-bodied, but the weak-minded perish and the strong-minded survive.

It does not appear, however, that evolutionists contemplate the manifestation of such a result as this in anything like a struggle between the individuals forming an aggregate, but only in relation to struggles between different aggregates, which are therefore treated in this matter as units of the human species, and subject as such to the law which would affect man as an animal if he acted independently of his fellows. But the law of natural selection, as an evolutionary agent, cannot immediately affect groups or masses. Its first and direct action must be on individuals.

A struggle for existence certainly takes place between tribes, races, or nations—that is, between the different associations which men have formed, and which act separately and independently. In that struggle the weaker are pushed aside or exterminated; but this carries the operation of the law of natural selection no farther than the point which makes it a law tending to keep mankind, as a whole, to a uniform standard. Such a struggle between tribes or races neither implies nor involves anything new in their environments—that is, any such change in them as would be calculated to call into active operation powers which, in other circumstances, were little used or needed, and to give such a special development to those powers as might end in producing men altered in structure either for the better or the worse.

Men combine to defeat the law of natural selection in regard to the individuals combining; but that law no doubt still continues to operate fully as between the various com-

binations so formed; and it will not cease to operate until there occurs a coalescence of combinations, when it will be defeated, in regard to the combinations, also, in the same ways and with the same results as cause or attend its defeat within the aggregates separately in regard to the individuals forming them.

It is difficult to see, therefore, how the evolutionary operation of natural selection can present itself in the case of man, as we know him, either as regards his mind or his body.

It is evident that a change in the mental capacity of a race must be a change in the mental capacity of the individuals composing the race; and mental capacity cannot be modified without some modification of the brain, through which mind is manifested. In other words, a structural or bodily change must accompany a mental change. The brain must increase or diminish in size and complexity, and the cranium must undergo corresponding modifications.

This is admitted; but it is assumed as probable that such a change of the brain and skull has actually taken place; and Mr. Wallace tells us that our best chance of finding the vastly remote small-brained and small-headed progenitor of man is on the widest area of land in the warmer region of the earth, which has not been submerged since Eocene or Miocene times.*

Up to the present time, however, this progenitor of man has not been found. Hitherto no trace of him has been discovered. We have as yet no knowledge of the existence of such a *Man* at any time on the earth.

Very important testimony on this subject has recently been borne by Rudolph Virchow, than whom there is perhaps no more prominent scientist in Europe. In an address

* Wallace, op. cit., p. clxvii.

delivered in September, 1877, to the German Association of Naturalists, when speaking of the often-made assertion that some of the vertebrata—not necessarily the ape, as is commonly supposed—appear in the connection of ancestors to man, he says: “I am bound to declare that every positive advance which we have made in the province of prehistoric anthropology has actually removed us farther from the proof of such a connection.”* He goes on to say: “When we study the fossil man of the quaternary period, who must of course have stood comparatively near to our primitive ancestors in the order of descent, or rather of ascent, we always find a *Man*, just such as men are now.”

“As recently as ten years ago,” he points out, “whenever a skull was found in a peat-bog, or in pile-dwellings, or in ancient caves, people fancied they saw in it a wonderful token of an inferior state, still quite undeveloped. They smelt out the very scent of the ape; only this has continually been more and more lost. The old troglodytes, pile-villages, and bog-people prove to be quite a respectable society. They have heads so large that many a living person would be only too happy to possess such.”

He tells us that “our French neighbors, indeed, have warned us against inferring too much from these big heads. It may have been that their contents were not merely nerve-substance, but that the ancient brains may have had more interstitial tissue than is now usual, and that, in spite of the size of the brain, their nerve-substance may have remained at a lower stage of development.” But, with reference to this, he adds, “This is but the sort of familiar talk which is brought in as a kind of prop for weak minds. On the whole, we must really acknowledge that there is a complete absence of any fossil type of a lower stage in the develop-

* “Freedom of Science in the Modern State,” R. Virchow (London, 1878), pp. 58, 60, and 61.

ment of man. Nay, if we gather together the whole sum of the fossil men hitherto known, and put them parallel with those of the present time, we can decidedly pronounce that there are among living men a much greater number of individuals who show a relatively inferior type than there are among the fossils known up to this time."

It may be accepted, therefore, as certain that we have not yet succeeded in obtaining any evidence that man's mental capacity or bodily form has actually been favorably influenced by evolution. The skulls and brains of the fossil man, that is, of the earliest man we know anything about, appear to have been as good as, if not better than, the skulls and brains of the latest, belonging to individuals living in the highest state of civilization.

It appears to me to be very necessary, in examining this question, not only to bear in mind that all societies of men reach and keep their civilization under the leadership of a strong and cultured few, but also to keep in view the necessary sequence that the great bulk of highly civilized societies is made up of the comparatively weak and uncultured. It is probable, indeed, that the proportion of the weak and uncultured is greater in high civilizations than in civilizations of an inferior type, and I think it may be accepted as more than probable that the range between the best minds and the worst minds is greater in high than it is in low civilizations.

We have the means of roughly estimating the proportion of the cultured to the uncultured in such a civilization as our own. For instance, taking Scotland as a whole, it is found that "very nearly a third of our population lives in houses of one room. Much more than two-thirds, viz., 69.54 per cent. of our population, live in houses of one or two rooms, while 82.11 per cent. live in houses of three rooms

and under ; and if we reckon all the persons living in houses of one, two, three, or four rooms, it is seen that 88.05 per cent. of the population live in such houses. Few, if any, of this class of the population who inhabit such houses pay national taxes ; so that from the above statement it may be inferred generally that the remaining 11.05 per cent. of the population constitute the wealth and support of the country, while the 88.05 per cent. constitute the artisan, laboring, and pauper class.* These are not my words, but those of the Registrar-general.*

If, then, only 11 or 12 per cent. go to make up the wealth and support of the country, it may fairly be inferred that a not much higher percentage makes up the culture of the country.

In Edinburgh we have, in round numbers, 33 per cent. of the population living in houses of one room, 30 per cent. living in houses of two rooms, 11 per cent. living in houses of three rooms, 7 per cent. living in houses of four rooms, and only 19 per cent. living in houses of more than four rooms.

The corresponding figures for Glasgow are : 41 per cent. in houses of one room, 37 per cent. in houses of two rooms, 11 per cent. in houses of three rooms, 3 per cent. in houses of four rooms, and only 8 per cent. in houses of all sizes above four rooms.

It by no means follows from such facts as these that we do not often find great intellectual power, and occasionally much culture, among people occupying very small houses. No one knows better than myself that these things do present themselves (and the knowledge and the fact conform to my whole argument) ; but, nevertheless, the facts which I have just stated may be regarded as furnishing a substantially correct indication of the breadth of our higher culture.

* Eighth Census, Scotland, p. xxxiii.

If we pick out of the population of Lanarkshire the 7 or 8 per cent. who live in houses of more than four rooms, or even, to make the supposition more impressive, the 9 or 10 per cent. who live in houses of more than three rooms, we should still leave in the county little short of 700,000 people. The density of the population, indeed, would scarcely be affected.

Or, if we take out of the city of Glasgow every person whose name is in the Postal Directory, even if the size and scope of the directory were doubled, the population of the city would not be very materially influenced; but the influence on the character of the population would be inconceivable. All clergymen, doctors, lawyers, architects, artists, engineers, builders, school-masters, bankers, manufacturers, merchants, shopkeepers, and, in addition to these, all persons of any corresponding occupation or in any similar social position, would be suddenly withdrawn with all their culture, and perhaps much of their wealth.

If such a thing happened to a nation it would fall to pieces, and there would be an end of the civilization which belonged to it. The cultured would take all their culture with them; but they could neither leave nor take their civilization, which is the possession of the aggregate in its entirety, and does not belong separately either to the section going or the section left. In every civilized society there must be the strong and the weak, the clever and the stupid, the cultured and the uncultured, but they all share in the state of civilization and benefit by it. It belongs to the society as a whole—not to any one class, but to all classes in the combination.

It will be useful, before leaving this part of my subject, briefly to state the chief conclusions which seem to have been reached. They are:

1. That man is not influenced by the law of natural selection in the way the brutes are.

2. That, in consequence of this, his bodily form and structure and his mental capacity appear to continue stationary.

3. That he escapes the law of natural selection as the result of his own exertions; he forms combinations to defeat the law, being only able to do so through co-operation and the division of labor.

4. That it is as the outcome of the mental power with which man is endowed that such purposes are conceived and worked out by human societies.

5. That the most ancient man of whom as yet we know anything does not seem to have been inferior, either physically or intellectually, to the latest and most highly civilized, and that there is no evidence that man has not been what we now see him ever since he had mental powers prompting him to form combinations to resist the law of natural selection—and ever since his origin, if he then had those powers.

6. That natural selection being successfully set at defiance, and the unfit as well as the fit surviving to propagate, there may follow consequences of a kind opposed to those which are usually accepted as the results of the law in question.

7. That civilization is the outcome of the war which man in society wages against the law of natural selection, and that the measure of success in the fight is the measure of the civilization attained.

LECTURE II.

(21ST OCTOBER, 1878.)

3. CAN THE BRUTES BE CIVILIZED?—4. CAN MAN IN ISOLATION BE CIVILIZED?—5. WHAT IS THE UNIT OF A CIVILIZED ASSOCIATION?—6. WHAT ARE THE STEPS BY WHICH CIVILIZATIONS ARE REACHED?

3. Can the Brutes be Civilized?

Is it possible that an association of brutes can present a state of civilization? Bancroft says that it is impossible,* yet every one knows that there occur among the lower animals very remarkable and large associations, in which both co-operation and division of labor appear, and that great works are thus accomplished, far beyond what could have been accomplished by any individual member of the association. At first sight this certainly wears some of the aspects of a state of civilization, but it is found on examination that the true state of the case does not at first sight disclose itself.

Perhaps the insect world furnishes the best illustrations of these associations. The societies formed by bees and ants are familiar to every one, and it will be sufficient to show in regard to them how it happens to be really an inaccuracy to speak of the co-operation and division of labor in the associations which they form, as of the same nature as the co-operation and division of labor in societies of men.

* Bancroft, *op. cit.*, vol. ii., p. 4.

Mr. Herbert Spencer has made this very plain. In the case of bees and ants, for instance, he points out that there are structural differences between those individuals of the association which perform one kind of work and those which perform another, and the seeming division of labor is the outcome of these structural differences, and not a voluntary undertaking, or the allotment of certain parts of a work to certain members of a society, all the members of which have the same structure and the same instincts and functions. In a society of bees all the members are born of one mother, but they are not all structurally the same, and they have, consequently, different instincts and functions—that is, there are among them, as among ants, “different classes of individuals structurally adapted to different functions.”* Mr. Spencer, speaking of social insects, says: “Instead of two kinds of individuals descending from the same parents,” as happens in the case of man, there are “several kinds of individuals descending from the same parents.”†

The performance of different kinds of labor by individuals of a community thus diversely constructed cannot be regarded as synonymous with what is known as the division of labor in societies of men. And it follows that those seeming evidences of civilization, namely, co-operation and the division of labor, which present themselves in communities of insects, have no strict relationship to the same things when they occur in communities of men.

There is more difficulty, as Mr. Spencer points out, in showing that the recognition of proprietorship, the orderly action, and the punishment of offenders, which such gregarious birds as the rook are said to display, is not, in a small measure, the analogue of what happens in societies of men.

* Herbert Spencer, “Principles of Sociology,” 2d edition, 1877, p. 5.

† Spencer, *op. cit.*, p. 7.

The difficulty increases when we attempt to explain such great works as are constructed by societies of beavers—works “of a size and complexity far beyond any that would be possible in the absence of united efforts.”*

These and similar things certainly exhibit something like a kinship to states of civilization, in as far as they appear to be unions which may interfere with the law of natural selection. Through the general co-operation they seem to give to the weaker members of the community a better chance of survival than they would have if each individual were battling for itself, and if no part of the work on which its comfort and existence depend were performed by a united effort of the society of which it is a member.

It would be unsafe, however, in the existing state of our knowledge, to assume that the co-operation of beavers in building their dam has any object of this kind in view, or any such result. And it would not be justifiable to use such a thing as proof of the occurrence of states of civilization among the brutes, because our understanding and interpretation of the phenomena may be wrong, and our observation of them inaccurate and incomplete.

While this is true, it is also true that the existence of satisfactory evidence of states of civilization among the brutes would not affect my views as to what constitutes the true nature of human civilizations.

There exists one striking and perhaps radical difference between the seeming states of civilization in societies of brutes and the civilization of human associations. It is this: In the habitudes of the lower animals there has been, so far as we know, neither progress nor change of any kind. If civilization occurs among them, it is always and absolutely of one pattern and degree. Among men, on the other

* Spencer (speaking of social insects), *op. cit.*, p. 4.

hand, it is not only of degrees and patterns which are extremely different, but it is also, without cease and everywhere, undergoing change. Human civilizations are high and low, and both high and low are of one kind or pattern here and of another there. They are young and old, "are founded, flourish, and decay." All this is entirely different from the quasi-civilizations of brute societies. A hundred young beavers separated from their parents and brought up in captivity, if set free, would proceed to build the very same kind of dam which their parents had built. Such, at least, is the common belief. There would be no appreciable difference either for the better or worse. It would be the same as had been built by all preceding generations of beavers. As Bancroft says: "The bird builds its nest, the bee its cell, the beaver its dam, with no more skill or elaboration to-day than did the bird, or bee, or beaver primeval."* Their sphere of action is not known to alter or to enlarge. They do not unite in order to create for themselves what may be called an artificial existence, with a view to increased comfort, or increased safety, or improved well-being of the greatest number. There is no evidence that birds, and bees, and beavers do anything now which they have not gone on doing quite as perfectly ever since there were bees, and birds, and beavers.

THE question, however, of the possibility of brutes displaying a state of civilization has not been fully answered till we have seen how the matter stands with those of them which are in a state of domestication. It is easy to see how it may be held that animals can be civilized when the work is done for them by man. When he gives them a place in human societies, then, perhaps, they may be considered as

* Bancroft, *op. cit.*, pp. 19, 21.

entering on a state which, from some points of view, may fairly be regarded as a state of civilization, though they do not themselves acquire and cannot of themselves keep it. It is perhaps not incorrect to say that domestic animals form a true part of human associations, and it is certain that in regard to them the law of natural selection is defeated. The association provides such animals with food and shelter, with doctors and hospitals, and generally with such things as tend to control that law, and the animals in return work or even die for the association.

Rousseau and others speak of civilization as a denaturalization. Whether it is or is not this when it concerns man, it certainly wears that aspect as it is seen in the case of the domestic animals. The ills it brings them are many, the blessings and advantages few. Yet there is a sort of respectability and dignity in their position, and some of them, when compared with their savage fellows, may even be considered as genteel and fine-mannered. They share in the society's labors, doing those parts of its work for which they are better fitted than the human members, to some of whom, in the division of labor, is allotted the task of supplying them with food, and combing and currying them. They are not, however, as animals—as mere horses, or dogs, or oxen—improved by this. On the contrary, and very emphatically, they are injured. Turn them out of the association, and in the struggle for existence on which they would then enter they would naturally be selected for death, as the least fitted of their species to survive. The deer-hound, and watch-dog, and sheep-dog have different qualities, which fit them for different posts in the division of labor; and the thorough-bred and the dray-horse show respectively the qualities of speed and strength, both of which are needed. All such different qualities are cultivated in domestic animals with a care much like that bestowed on

the cultivation of the qualities needed in carpenters, or masons, or lawyers, or doctors. In fact, human members and brute members of these associations are treated very much on the same principle and with the same object, though the ends are obtained by means which are admittedly different. In the human and brute members alike, those qualities are cultivated by the association which are for its general advantage, even though the cultivation of them may not add to the well-being and vigor of the individuals in whom they are cultivated, and even though it may be attended with hardships and cruelties. That this is true of the brute members is clear and certain; but is it not also true that the human members are induced in a thousand ways, or even forced by the aggregates, to perform tasks or devote themselves to occupations which are difficult, disagreeable, and dangerous, but which are thought necessary to the prosperity of the aggregate? It may be well known that this involves a sacrifice of many; but it is nevertheless done, because the good of the greatest number—that is, the prosperity of the aggregate as a whole—is promoted by it. In early and low states of civilization such sacrifices of the human members are often great and by no means voluntary. As regards the inferior animals introduced into human associations, participating in a certain sense in their civilization, and made subject to man's selection instead of natural selection, there is, of course, still less voluntariness in their co-operation, a still greater disregard of their individual well-being, and a still greater readiness to sacrifice them. Yet it appears that all that is true of them, even of those of them whose very business it is to die for the good of the aggregate, is in a measure true of the human members, so that the principle on which the treatment of both human and brute members rests is essentially the same—differing rather in degree than in kind.

4. Can Man in Isolation be Civilized?

I HAVE already and repeatedly stated that no man in isolation can become civilized. This, indeed, is so plainly true that it seems almost useless to dwell on it. Yet it is necessary to realize it fully, in order to comprehend correctly the converse assertion that civilization can only present itself in a community or nation.

In the case of an isolated man the impulse to acquire a state of civilization is entirely wanting and cannot be present, because he has no one to help, and there is no one to help him in his war with natural selection.

The isolated man would, of course, be influenced in his condition by his environments. They might render his struggle for existence a hard one, or they might make it comparatively easy. He would search for favorable surroundings, and his intelligence would help him in this search. He would undergo a certain education—would acquire a certain culture. His cunning would be developed, and the senses of sight and hearing made more acute by training. In this way he would be able to avert some dangers which his naturally weak physical constitution would render it unsafe to encounter openly. The lower animals among which he lived would have similar acquirements, and in his single-handed struggle for existence he would have mainly to depend like them on his brute strength and powers of endurance.

He would have no speech, and no need of it. Whether he would have clothing would depend on circumstances. His time would be chiefly spent in searching for things to eat. Yet this man-of-the-woods, this complete savage, whom I assume to have been in isolation from childhood or early

life, might be the son of a Lord Chancellor, and might himself in other circumstances have become a Lord Chancellor. However high his mental capacity, he would be and would remain a savage till he perished in the struggle for existence. He could never reach a state of civilization while alone. He could only do this by finding fellow-men with whom he could combine to resist the law of natural selection.

To what extent would it fare differently with a man who, before his isolation, had reached adult life as the member of a society advanced in civilization, and who had even been a cultured and prominent member of that association? Let us suppose, for instance, a young professional man, full of knowledge, and with his intellect and morals highly cultured, to be suddenly transported from a populous and highly civilized country to a country without inhabitants. He would take his culture with him, but he could not take his state of civilization.

Thirty or forty years after, if he survived so long, we should probably find him prematurely old and broken down; going naked or clothed in skins; grubbing for roots or gathering shell-fish; perhaps living in a cave, and sleeping on a bed of dried leaves; probably with fire at his command; without pottery, unless of the rudest character; with no metals; scarcely with implements of stone, certainly with none that were highly finished; and perhaps speaking with difficulty the language once familiar to him. His culture might not be wholly useless to him, but it would not be of much use. Iron and copper might be in abundance about him, but what could he do with them, though he might be well-informed as to their value and uses? The culture he had received was intended to fit him for acting as one of an association, not for acting in isolation and helping himself in every respect. A lower culture, having perhaps less of

the character of scholarship about it, might possibly have been more useful to him in his solitude than the special or professional culture he had received. An uncultured laborer, for instance, might have been better off.

Though still possessing his culture, he would have ceased completely to live in a state of civilization. Culture is not civilization. If it were, we should have in every company as many degrees and kinds of civilization as there are persons in the company, while in reality the whole company stand on the same level as regards their state of civilization. Individuals may be highly cultured in various or in special directions; but, as individuals, they are not, and cannot be civilized. Civilization only affects aggregates, and can only appear in societies of men—in tribes, that is, or states, or nations. As Bancroft says, "it is something that lies between men, and not within them."* It is not an attribute of the individual. Culture, on the other hand, is a strictly personal possession.

It is almost unnecessary to point out that these views are in no way affected by our finding it the business and interest of a highly-civilized association to cultivate in individual members the acquisition of those different arts and kinds of knowledge which may be serviceable in the maintenance and furtherance of its civilized condition—which may add to the material comforts and prosperity, or to the enjoyments and pleasures, of the aggregate.

Association thus appears to be the very first requisite of that action the fruit of which we recognize as a state of civilization. No such state ever has birth till men meet with men, and band together for mutual help or protection. It is the off-spring of banding together, and is a quality of

* Bancroft, *op. cit.*, vol. ii., p. 56.

the whole society so formed. It is not a quality of the individuals composing the society, and is "not transmittable by generation through individuals." It belongs to the whole association, and does not go with the individual member when he leaves it. So long as he remains in the association he must possess its civilization and participate in its advantages. When he leaves it, on the other hand, he cannot take its state of civilization with him—though, of course, he can take his culture, which, as I have said, is a personal possession.

5. What is the Unit of a Civilized Association?

It is desirable at this stage to ask what constitutes the individual or the unit in a civilized association. I have hitherto used the word individual in its common sense—that is, as meaning a single person, whether man, woman, or child. But it appears to me that the true unit of the association which we are studying is the family.

Civilization could not possibly occur in associations consisting exclusively of men, or exclusively of women, or exclusively of children. These, indeed, would not constitute human societies. They would be only societies of sections of mankind, and the correct way of naming them would be associations of the male form of man, the female form of man, and the immature or "neutral" form of man. Males and females together constitute mankind. Neither men nor women separately do so. And since children, whether born or unborn, are really a part of their parents so long as they depend for nurture on their parents, it seems clear that they must go with them.

It thus appears that associations or societies of men, whether in high or low states of civilization, are made up

of families. This view derives support from the fact that when they break up, they break up into families. The ancient *Civitas*, or city, or state, was, in the most literal sense, an association of families. It is true the family of the Roman *Civitas* was larger than the family I speak of, since it included children of all ages; but, in doing this, it became more than the unit, since the adult children might and should be parts of other families forming other units.

A *Civitas*, indeed, was simply a union of families for purposes of defence and aggression. When families formed an association with these objects, they formed a *Civitas* and became a *city people*, or a civilized people, as distinguished from a savage people, or people of the woods, as the word savage (*silvaggio*) means.*

No doubt this view of the social unit fails to take into account adult men and women who have not entered into family relations. Such persons are practically numerous in human associations, and their position is often important and prominent. But in the ideal society they do not appear, and if in any society they become the majority, the declension of that society is, of course, inevitable.

The importance of considering the unit of civilized human societies as the family, in the sense I have given to the family, lies chiefly in this, that there are relations between parents and immature children, depending on laws of nature, with which the association cannot interfere without endangering its prosperity. To this subject I shall have occasion to refer when I speak of the causes of decline in high civilizations.

* In old Scotch documents, when these are in English, barbarians are called "wild men of the woods," and when they are in Latin, "*homines sylvestres*."

6. What are the Steps by which Civilizations are reached?

I HAVE arrived at that point now when I can properly and advantageously notice some of the more important factors which contribute to the begetting of states of civilization, and some of the steps by which a high civilization is reached.

The first combinations of men are probably formed for the purposes of war. These purposes are, on the one side, the protection of life and property—that is, the prevention of murder and robbery; and, on the other side, the taking of life and property—that is, the perpetration of murder and robbery. Men are moved to combine to obtain advantages and rights which are conferred by might. They unite to protect what they have got—their lives and property; and to take from others what they have got—their lives and property. Out of evil, as well as good, civilizations thus appear to spring.*

Men unite to make themselves strong in the struggle for existence. They know that they can overcome in combination where they would perish as individuals, and therefore they combine. They form societies to defeat a law of nature; and to make war on their fellow-creatures seems to be an inevitable part of this contention with nature. At first sight nothing but wickedness thus presents itself as the starting-point of civilization; but a second look discovers good as well as evil in civilization from its very birth. For instance, we see in it from the outset an effort to secure the greatest good of the greatest number. In societies as they

* See Bancroft, *op. cit.*, vol. ii, p. 29.

start there are no classes or class privileges. These societies are commonwealths, and the wars waged by them are really for the general good. If a tribe occupies a country rich in game and abounding in edible plants, that tribe fights to hold it against another tribe fighting to get it. The object of each tribe is to secure conditions of life which will make the struggle for existence as light as possible to all within it—which will make it easy for all to obtain food, clothing, and shelter. Selfishness, of course, may be said to show itself on the part of the defender as well as on the part of the aggressor, for the one wishes to keep and the other to gain an advantage; but both act for the general weal of the respective associations.

It must not be supposed, however, that the roads travelled by a savage society emerging from its savagery, or passing from a very low to a higher civilization, are essentially different from the roads which highly-civilized societies travel in maintaining their civilizations. War does not cease where civilization is ripe, nor are its purposes changed. It may no longer be conducted in what is called a rude and barbarous way. It may even be exalted into a science. Its respectability may be influenced by speaking of a *raid* as a *campaign*, and by other such uses of language. Its weapons may show greater skill in contrivance and greater beauty of finish. But evil does not cease to be evil though it be spoken of in mild and polished phrases; and, in one sense, it matters little whether men go into battle with stone axes, bronze swords, or iron guns. Are not the promptings to war still the same, and do not its spirit and its issues remain unchanged? Do savages never fight for their faith and their homes? On the other hand, do men in a state of high civilization never fight for revenge or aggrandizement? Is the business of war less bloody and cruel because the sword or the bullet takes the place of the tomahawk? In what lies the difference between striking down

a foe with a stone hammer, cutting him down with a bronze sword, or shooting him down with a rifle? Does the brutality of war depend on the ignorance shown in the contrivance of its instruments? Science has improved the weapons of war, but what blessings flow from this? Has human nature been elevated by the contrivance of breech-loaders? Does the making of a giant gun constitute progress in a people's worth? Does war really become less horrible and cruel when there are international rules for conducting it, as if it were a game of cricket or foot-ball—when some things are decided to be fair and others to be unfair; as, for instance, that it is allowable to kill by explosive bombs or explosive torpedoes, but not by explosive bullets—when nice points of etiquette and West Endism are introduced into it by the shoddy philanthropy of a *general* convention? Is the ferocity of war—are its horrors and cruelties—really lessened by shifts like these? Is not the bloody business essentially the same in its nature, and the same too in its purposes, in the hands of men who lay ambushes and carry off scalps as trophies, as it is in the hands of men who blow up forts by secret mining, or ships by skulking torpedoes? We have dropped into a way of talking of *civilized warfare* as if it meant something different from—something more than—a warfare between consolidated States with great resources as distinguished from a warfare between small States, loosely held together and with limited resources of weapons and men. But what more than this does it really mean? Do we not delude ourselves when we think that we really believe that, in a so-called civilized warfare, humanity and benevolence take the place of selfishness and cruelty? Ought we not to recognize in war one of the many threads which run all through our high civilization, and connect it with that savagery of which we proudly but ignorantly boast that we bear no trace? Is war a transaction into which a high civilization or a high

culture can ever introduce love and mercy? Does it not rather seem to be the outcome of something persistent in man, whether he is cultured or uncultured, civilized or uncivilized?

ONE of the earliest fruits of the wars, out of which civilizations spring, would be the notion of property. Things which had been gained or made with a view to the comfort and security of the aggregate, would be felt to be its property. There would soon follow the notion of private or personal ownership—at first, of course, only in reference to those things which were of the nature of movables. In regard to land, the idea of a personal ownership would arise more slowly.

Perhaps, indeed, there is never, even in the highest civilizations, a personal ownership of land which is as complete, for example, as the personal ownership of a knife or a spade—the aggregate always retaining some direct or indirect interest in, and control over, land as a possession. A very considerable advancement was made in the Roman civilization before any family could sell its land. For a long period the land was the property of the family only in the sense that it could not be taken from it. It was not property which the family could give away or sell. The land of a family, though immediately its own, belonged remotely to the aggregate, and neither the aggregate nor the family could alienate or sell it.

The property of the aggregate, namely, its fields and hunting-grounds, would be held by the “right of might”—the tribe as a whole doing battle for it against robbers from without. But the recognition of a personal proprietorship, say in a tomahawk, would soon lead to Laws overriding the “right of might” within the association, and giving in its

stead a legal right. Men would combine primarily to resist attacks from without—or rather for purposes of aggression as well as defence—and it would be a natural outcome of this banding together, that, within the association, the weak should be protected against the strong, and the good against the bad. All—both the weak and the strong—as elements of the association, would have their uses, and it would soon be felt that there could be no true co-operation and division of labor without a respect for the rights of personal property enforced, under Rules or Laws, by the aggregate.

SUCH progress as that just noticed is always due to leaders—that is, to the men of strongest intellect and force of character in the association. In all young societies these men would be brought to the front by war, and in all probability the qualities which would chiefly characterize them would be personal prowess and courage. The multitudes would follow him who had shown the least fear and had killed most of the common enemy. Such a man, however, would not probably be inferior to his followers in mental capacity. On the contrary, the likelihood is that he would be superior; for men of courage and bodily vigor are not usually found among the feeble-minded. Though such leaders, therefore, might gain their position primarily as the result of their physical strength and fearless character, it would practically happen that they would generally overtop their fellows also in mental and moral power. They would thus be the best men in the society to direct its operations in the struggle for existence—to resist the attacks of enemies, whether human or brute; to secure abundant supplies of food; to discover the best hunting-grounds; to devise ways of killing game; to make clearances and choose sites for villages; to invent weapons, tools, and domestic utensils; to suggest the domestication of animals and the

cultivation of plants—to guide the association, in short, into a higher state of civilization.

It is true that much of the progress so made would not be taken as the result of independent discoveries or inventions, but would be the outcome of communications by one society to another. Our knowledge of what is happening, and of what has happened within the period of history, leads clearly to this conclusion. The Red Indians of North America, for example, have now many domestic animals, but they received them from us within a century or two of the present time. They have guns and gunpowder too, as, indeed, have savage races in many parts of the world—not, however, as the result of inventions or discoveries made by themselves, but as the result of communication with people in a different, and generally in a higher, state of civilization and culture.

Notwithstanding this, such leaders would still be the authors of progress. Though they might not be inventors themselves, they would prove the ready appreciators of the value of the inventions communicated to them by others.

It does not follow that such leaders as I have been speaking of would not be unscrupulous, cruel, and tyrannical. They would assuredly be despots, for the government of every early civilization must, and perhaps ought to be, a despotism. Bancroft points out that though despotism is an evil, it is, in certain states of society, “as essential to progress as any good,” and he reminds us that many other things appear as aids to progress at certain of its stages, which at other stages form the greatest drags on it.* Leaders of infant societies grow out of wars, and war and despotism are inseparable. Even when constitutional govern-

* Bancroft, *op. cit.*, vol. ii., pp. 33, 61.

ment has been reached, war entails a partial despotism. How else do we explain such things as states of siege and martial law? The leaders, therefore, of whom I speak here, would certainly be despots—with the virtues possibly of courage and chivalry; and they would almost certainly be cruel in enforcing discipline and obedience, and in exacting reverence.

It is often referred to as a marvel that a passionate untamed tribe of savages should render obedience and homage to their leader with so much submissiveness as they do—even giving life up unresistingly at his caprice or for his pleasure. This cannot be satisfactorily explained by the dread they have of him as a man—inspired by his feats of strength and by his fearlessness and daring. There must be something more than this, and all the accounts we have of savage societies seem to show that superstitious feelings are at its root. “The strongest and most cunning of the tribe, he upon whom leadership naturally falls, comes to be regarded as specially favored of the gods,” and as possessed of supernatural power.* This is neither difficult to understand nor wonderful, for is there not a divinity hedging kingship in the very highest states of society as well as in the rudest?

Wherever it occurs, such a superstition is nothing but a form of worship, a manifestation of the natural cultus which is a part of man's constitution, and which appears in every state of culture and civilization. And it would be unfair to conclude that, as a mere intellectual effort, there is more difficulty in accepting a belief like that to which I have referred, than there is in accepting many beliefs which prevail in the highest civilizations. No one, I think, will dispute this who gives the matter consideration.

* Bancroft, *op. cit.*, vol. ii., p. 69.

MAN, as I have said, is moved to combine, in order to obtain and secure advantages and comforts. Hunger is hard to bear, and he wants to make himself sure of food. Cold kills him, and he must have clothing and shelter. He is ready to struggle for these and other like ends, but he can do little alone; therefore he forms combinations in which all shall labor together.

The first object of such a combination is to secure for all who form it the absolute necessities of existence. But labor soon brings more than this; the fruits and value of labor begin to be appreciated, and a more complete co-operation springs up. Manufacturing and trading increase. The division of labor is developed, and the resulting comforts are multiplied to each. Men are no longer dependent on the chase for a supply of food, nor is each one obliged to till his own field. The maker of weapons and tools can buy with these things the fish, the game, and the corn he needs. There is something different now from a daily struggle for daily necessities. Wealth and property begin to be accumulated, and their possessors can secure the necessities of life without being obliged to work for them. They can get others to do the work, and thus is reached that most important of all steps in the history of the march of civilization, the possession of leisure. Till this state is reached, there are no opportunities for intellectual culture. As Bancroft admirably puts it, "the mind must be allowed some respite from its attendance on the body before culture can commence."* The importance of this is not seen merely in a wider general culture within the association, through the greater general leisure which comes of a greater general prosperity and wealth; its importance is, perhaps, more strongly seen in the opportunity which arises for the development of an entirely new class of workers—men de-

* Bancroft, *op. cit.*, vol. ii., pp. 42, 55.

voted to the acquisition of knowledge to be used eventually for the general advantage. When a society has arrived at such a point in its civilization as to render laborers of this class even possible—still more, if a point has been reached when the society sees and acknowledges it to be for its good to give positive encouragement to the growth of such a class—then we may properly cease to follow the steps by which its civilization will grow. The easy attainment of further advancements is plain.

It has been shown that out of evil good appears to come, and that in the good itself when reached there remains much evil. Upon the very surface of the highest civilizations many things appear which are also to be seen in the lowest. The features, indeed, both good and bad, which are common to the highest and to the lowest, are numerous and important.

I shall not occupy time by asking whether civilization is a blessing or a curse—whether man in a state of civilization is happier than man wild and unfettered.* But there are some good reasons for thinking with Bancroft that “civilization has its vices as well as its virtues—savagism its advantages as well as its demerits,” and that while “the evils of savagism are not so great as we imagine, its pleasures are more than we are apt to think.”†

If some of the best qualities of the highly civilized are to be detected in the savage, and some of the worst qualities of the savage in the highly civilized—if there are good things common to both and evil things common to both—if the two conditions are mere degrees of each other—if the

* Bancroft, *op. cit.*, vol. ii., p. 34.

† *Ibid.*, vol. ii., p. 37.

same human nature appears in both states—if these things are true, then perhaps there may also be some truth in the saying that “civilization is as much the natural state of man as savagism.”

LECTURE III.

7. CAN CIVILIZATION BE LOST, AND IS THE SAVAGE IN A STATE OF DEGRADATION?—8. DO MEN IN A STATE OF HIGH CIVILIZATION SHOW ANY DESIRE TO RETURN TO A RUDER AND SIMPLER LIFE?

7. Can Civilization be Lost, and is the Savage in a State of Degradation?

It is universally admitted that a nation may pass out of a state of savagery—in other words, out of a low state of culture and civilization—into a state of high civilization. We ourselves furnish an illustration. Less than two thousand years ago we were barbarians, and now we boast that nowhere in the world is there a civilization more advanced than ours.

Is it possible that we shall ever lose it? Is civilization a thing which is maintained by an effort, as well as acquired by an effort? Do civilizations become old and decrepit, and die out by a reversion to the savagery out of which they emerged? Are there any outgrowths of civilization which tend to destroy its vigor? Are there any seeds of disease bred within itself? In the world, as a whole, are the centres of civilization permanent, or are they forever shifting? These are interesting and important questions, which I shall now make an effort to answer.

THE tendency to go on forever becoming something better and nobler does not exhibit itself in the history of man,

so far as we know it. Some of the advocates of the doctrine of evolution hold that the existence of such an intrinsic tendency *in everything* is an incorrect conception of the doctrine. We are told, for instance, by Herbert Spencer, that "though, taking the entire assemblage of societies, evolution may be held inevitable as an ultimate effect of the co-operating factors, intrinsic and extrinsic, acting on them all through indefinite periods of time, yet it cannot be held inevitable in each particular society, or even probable. A social organism, like an individual organism, undergoes modifications until it comes into equilibrium with environing conditions, and thereupon continues without further change of structure. When the conditions are changed meteorologically or geologically, or by alterations in the Flora and Fauna, or by migration consequent on pressure of population, or by flight before usurping races," or by other such things, then "some change of social structure is entailed. But this change does not necessarily imply advance. Often it is toward neither a higher nor a lower structure. Where the habitat entails modes of life that are inferior, some degradation results. Only occasionally is the new combination of factors such as to cause a change constituting a step in social evolution, and initiating a social type which spreads and supplants inferior social types. For with these super-organic aggregates, as with the organic aggregates, progression in some produces retrogression in others: the more evolved societies drive the less evolved societies into unfavorable habitats, and so entail on them decrease of size or decay of structure."*

What Mr. Spencer here says appears to me to divide itself into these two things: First, taking all the human societies of the world together, evolution is inevitable—in other words, the going on forever becoming something

* Spencer, op. cit., pp. 107, 108.

nobler and better must occur in the assemblage of societies as a whole. Second, no such result is inevitable or even probable as regards each particular society; it undergoes change when the environments change, but that change will only occasionally be a change for the better—it will often be toward something lower, not toward something higher.

The first of these, that relating to the inevitable appearance of evolution in the mass of human societies, scarcely claims to be more than a speculation. The second, however, that relating to particular societies, may be said to rest on actual observation or trustworthy records. Indeed, as observation and research widen, the fuller and wider is the information we possess about these lapses from a higher to a lower condition. Mr. Spencer writes of them thus: "Egyptians, Babylonians, Assyrians, Phœnicians, Persians, Jews, Greeks, Romans—it needs but to name these to be reminded that many large and highly-evolved societies have either disappeared, or have dwindled to barbarous hordes, or have been long passing through slow decay. Ruins show us that in Java there existed in the past a more developed society than exists now; and the like is shown by ruins in Cambodia. Peru and Mexico were once the seats of societies, large and elaborately organized, that have been disorganized by conquest; and where the cities of Central America once contained great populations, carrying on various industries and arts, there are now but scattered tribes of savages." "Unquestionably," he adds, "causes like those which produced these retrogressions have been at work during the whole period of human existence. Always there have been cosmical and terrestrial changes going on, which, bettering some habitats, have made others worse; always there have been over-populations, spreadings of tribes, conflicts with other tribes, and escape of the defeated into localities unfit for such advanced social life as they had reached; always,

where evolution has been uninterfered with externally, there have been those decays and dissolutions which complete the cycle of social changes. That supplanting of race by race, and thrusting into corners such inferior races as are not exterminated, which is now going on so actively, and which has been going on from the earliest recorded times, must have been ever going on. And the implication is that remnants of inferior races, taking refuge in inclement, barren, or otherwise unfit regions, have retrograded.”*

I think, therefore, that we may safely accept the occurrence of retrogressions as a reality, and the theory of a universal progression as untenable. If this be so, it seems to follow that there is no adequate warrant for the notion that the lowest existing savagery has always or necessarily been as low as we find it. Mr. Spencer says that there are reasons for “suspecting that existing men of the lowest types, forming social groups of the simplest kinds, do not exemplify men as they originally were. Probably most of them, if not all of them, had ancestors in higher states; and among their beliefs remain some which were evolved during those higher states.” He thinks that “the tribes now known as lowest must exhibit some social phenomena which are due not to causes now operating, but to causes that operated during past social states higher than the present. This *a priori* conclusion harmonizes with the facts, and, indeed, is suggested by facts that are otherwise inexplicable.”† The degraded Bushmen of Australia furnish Mr. Spencer with his illustration of this. He points out that these savages, “divided into tribes wandering over a wide area, have, notwithstanding their antagonisms, a complex system of relationships, and consequent interdicts on marriage, which could not possibly have been framed by any agreement

* Spencer, *op. cit.*, pp. 108, 109.

† *Ibid.*, p. 109.

among them as they now exist; but which are comprehensible as having survived from a state in which these tribes were more closely united, and subordinate to some common rule. Such, also, is the implication of the circumcision, and the knocking out of teeth, which we find among them, as among other races now in the lowest stages. For when we come to deal with bodily mutilations, we shall see that they all imply a subordination, political or ecclesiastical, or both, such as these races do not now exhibit.”*

But the opinion that existing savagery is at least sometimes a falling away from a higher state does not rest solely on such views as these. It is drawn from observation and history, and rests on grounds like those which justify our holding that high and characteristic civilizations have been lost. In various parts of Africa, for instance, there seems to have been, in modern times, a falling off in civilization—a lowering of a low civilization. Mr. J. L. Wilson contrasts the sixteenth and seventeenth century accounts of powerful Negro kingdoms in West Africa with the state of the present small communities possessing little or no tradition of the more extended political organization which their forefathers had. “In South-east Africa, also, a comparatively high barbaric culture, which we specially associate with the old descriptions of the kingdom of Monomotapa, seems to have fallen away, and the remarkable ruins of buildings of hewn stone fitted without mortar indicate a former civilization above that of the present native population.” It is matter of history too that in North America a similar degradation has overtaken the Iroquois and Cheyenne Indians.†

* Spencer, *op. cit.*, pp. 109, 110.

† Quoted by Tylor in his “*Prim. Cult.*,” 2d Ed., Lond., vol. i., pp. 46, 47, from Wilson’s “*W. Africa*,” p. 189; Waitz’s “*Anthrop.*,” vol. ii., p. 359; Du Chaillu’s “*Ashango-Land*,” p. 116.

In considering this question, it is desirable to remember that there appear to be, in large savage communities or nations, tribes of outcasts, who may be said to correspond in some measure to the population of the slums of great cities among the highly civilized. Nor should we forget that a low civilization may disappear, with the people possessing it, from a large tract of country, leaving the region entirely unpeopled. Livingstone, for instance, in his "Last Journal," speaks of a country in the north-east of Moembe now entirely uninhabited, but once supporting a large and industrious population. The ridges on which they planted their maize, beans, cassava, and sorghum still remain to attest their knowledge of agriculture. Pieces of broken pots, with their rims ornamented with very good imitations of basket-work, are found in abundance; and that they were an iron-smelting people is shown by the fact that the clay pipes which are put on the nozzles of their bellows and inserted into the furnace are met with everywhere.*

Mr. Tylor, when speaking of things more or less of this character, says that they "are probably but part of a long series which might be brought forward to prove degeneration in culture to have been by no means, indeed, the primary cause of the existence of barbarism and savagery in the world, but a secondary action largely and deeply affecting the general development of civilization."† However it may stand with the primary cause of the existence of savagery, it may certainly, I think, be accepted as possible that some if not all of the lowest tribes of existing savages have had ancestors in higher states of culture and civilization.

THERE is one outcome of this conclusion, the importance

* Livingstone's "Last Journal," vol. i., p. 79.

† Tylor, "Prim. Cult.," vol. i., p. 48.

of which is evident. It is this : If the lowest savages known to us in the world at present are either probably or possibly in a state of degradation, they cannot safely be held as furnishing us with correct conceptions of the condition of the so-called primeval man. The attempt to use them for that purpose would be an attempt to get a knowledge of primeval man out of a degraded man—that is, out of a man who has failed to keep a higher condition which he once possessed, and which higher condition, for all we positively know, may be the nearer of the two to the primeval condition. Of late years, however, it has been usual, I think, to regard the savages of the world as revealing the condition of the so-called primeval man—as being more or less in the condition from which all men have risen.

THE view of the condition of existing savages which I have indicated as possibly or perhaps probably correct, has been adopted by great travellers and great students of man's history; by persons who have had large opportunities of observing the phenomena of savage life.

The traveller Von Martius, for instance, in his essay on American ethnology, first published in 1832, and the most interesting essay on that subject ever written, held strongly to the opinion that the savage tribes among whom he passed so many years of his life were a people in a state of degradation—a people who had fallen away from a higher state of civilization.

Tylor says that the deductions of Von Martius are the reverse of truth. Yet he concludes his examination of the question with nothing stronger than the opinion that there are “some grounds for the belief that the history of the lower races, as of the higher, is not the history of a course of degradation, or even of equal oscillations to and fro, but of a movement which, in spite of frequent stops and re-

lapses, has on the whole been forward.”* These “stops and relapses” seem to me to lead him necessarily to the further conclusion that “the want of evidence leaves us as yet much in the dark as to the share which decline in civilization may have had in bringing the lower races into the state in which we find them.”† It may be true, as he thinks, that such declines affect the history of particular tribes rather than the history of culture as a whole; but it appears to me that in this matter we have only to do with the way in which particular tribes are so affected, since it is the actual condition of such tribes which is made use of to teach us the condition of primeval man. Such teachings are sometimes presented to us as beyond question correct, though they are clearly of uncertain value, if they be not altogether valueless.

The opinion of the great traveller Von Martius, which I have just given, does not differ from the opinion which was reached by Von Humboldt, his rival in distinction as a traveller. He says: “The important question has not yet been resolved whether that savage state, which even in America is found in various gradations, is to be looked upon as the dawning of a society about to rise, or whether it is not rather the fading remains of one sinking amid storms, overthrown and shattered by overwhelming catastrophes.” “To me,” he adds, “the latter seems to be nearer the truth than the former.”‡ “The famous historian Niebuhr,” according to Whately, “is also recorded to have strongly expressed his full conviction that all savages are the degenerated remnants of more civilized races, which had been over-

* Tylor's "Early Hist. of Mankind," 2d Ed., Lond., 1870, p. 193.

† Ibid., p. 193.

‡ Humboldt had published this opinion long before my opinions were influenced, in personal intercourse with him, by those he entertained as to the true nature of the condition in which many savage races are found.

powered by enemies and driven to take refuge in woods, there to wander, seeking a precarious subsistence, till they had forgotten most of the arts of settled life, and sunk into a wild state.”*

THE struggle for existence operates among tribes and nations just as it does among individuals acting independently. In this struggle the strong flourish and survive, while the weak are pushed aside and perish. This is matter of history and of common observation. Nations or tribes have interests to be protected, an earth-hunger to be fed, passions to be ministered to, creeds to be imposed, and revenge, envy, or ambition to be gratified; and these things influence their acts as similar things influence the acts of individuals.

When it happens that on one side the nation engaged in the struggle is of great strength and high culture as compared with the other, then the might which in the name of right takes what it wants may eventually prove fatal to the very existence of the weaker society, deprived or robbed of its possessions. It does not prevent this result that philanthropy or religion is made the excuse for the robbery. When the struggle, on the other hand, is between weak societies, both of them in a state of low civilization and culture, then the weaker may be simply pushed back into the wilderness, to live on in a still lower state of civilization. This, for example, is what seems to have happened to the Ba-Kalahari,† who, according to Livingstone, are degraded Bechuanas. They now inhabit the Kalahari desert, where they can derive no advantage from such agricultural and pastoral acquirements as their ancestors possessed. In their

* *Lecture on the Origin of Civilization*, in “Miscel. Lect. and Reviews,” by Archbishop Whately, p. 43; Lond., 1861.

† Tylor’s “Early History of Mankind,” p. 187; Livingstone’s “Miss. Travels,” p. 49.

new home, indeed, these acquirements are useless. The most they can now do as farmers is to cultivate a garden for melons and pumpkins, and to rear a few goats. And so, perhaps, it is with the Digger Indians of North America. They belong to the Shoshones, and were brought down to their present state by their enemies the Blackfeet, who took away their hunting-grounds. They now lead a wandering life, lurking among hills and crags, slinking equally from the sight of whites and Indians, and subsisting chiefly on wild roots and fish, and on such game as a race so helpless is able to get. They are described as lean and abject-looking creatures, and they have been driven to abandon many useful arts which they possessed in their more fortunate days.*

Within the range of history, therefore, degradations are found presenting themselves both in races which are in states of high, and in races which are in states of low civilization: in other words, savages become more savage, as well as the highly civilized less civilized. Degradation and development alike occur within the range of history, and this being so, can there be any sufficient reason for concluding that both have not occurred beyond that range? Is it not true that many nations have ceased to practise arts which we think characteristic of a forward position in civilization? In Egypt, for instance, as Mr. Tylor points out, "the extraordinary development of masonry, goldsmith's work, weaving, and other arts which rose to such a pitch of excellence there thousands of years ago, have died out under the influence of foreign civilizations which contented themselves with a lower level of excellence in these things."† It even appears that the sort of knowledge

* Tylor's "Early History of Mankind," 2d Ed., Lond., 1870, p. 188.

† Ibid., p. 184.

which we think least likely to be lost may disappear. It is to such a loss that Sir Thomas Browne refers when he says of Egypt, that now "she poreth not upon the heavens, astronomy is dead unto her, and knowledge maketh other cycles."*

The descendants of the people who built the cities of Copan and Palenque, in Central America, still live where the old builders of these cities lived, but their special culture and their civilization have totally disappeared, and the ancient cities, "with their wonders of masonry and sculpture," are now deserted. But nothing, perhaps, illustrates this sort of degradation better than the coins of the old colonial cities of Greece. The early examples of these coins are beautifully designed, and executed with a skill which, perhaps, no existing nation can surpass. Less than 500 years, however, produced an almost incredible change. Scarcely can the figures be made out on those of them which are late, so rude is the copy of the old engraving; and it would be impossible to decipher the name of the city on some of them, if we had not the power of comparing the late with the early coins. It would seem, indeed, as if all the feeling of the artist and all the cunning of the workman—almost as if the very knowledge of the letters of the alphabet had been lost by those who survived the decay of that old Greek culture and civilization which had been imposed on them, and under which they had long lived. No theory of their having failed to rise in culture to the level of their governors can remove the fact I have referred to from its place as an illustration of the occurrence, within a short period, of a remarkable degradation.

The art of irrigation by watercourses acquired in a country, the successful cultivation of which necessitates irrigation, seems likely to be as difficult to lose as any art. Yet

* Quoted by Tylor, *op. cit.*, p. 184.

we are told that when the Spaniards conquered "the Moors and Peruvians, who were skilful irrigators, and had constructed great works to bring water from a distance to fertilize the land," they allowed these works, for the most part, "to go to rack and ruin; and in Peru, as in Andalusia, great tracts of land which had been fruitful gardens fell back into parched deserts; while in Mexico the ruins of the great native aqueduct of Tetzcoetzinco tell the same tale." In these countries, as, indeed, in British India under our own rule, the results of a high special culture of a conquered race are seen to decline in the face of a culture of its conquerors which is lower in that special direction. Tylor points this out, and, speaking of Mexico, shows a sequel which is very curious. "The Spaniards in America," he tells us, "became themselves great builders of watercourses, and their works of this kind in Mexico are very extensive, and of great benefit to the drier regions where they have been constructed. But when a portion of territory that had been under Spanish rule was transferred to the United States," whose civilization may, perhaps, be correctly called the most progressive in the world, "what the Spaniards had done to the irrigating works of the Moors and Peruvians the new settlers did to theirs. In Froebel's time they were letting the old works go to ruin."*

This instructive illustration of an oscillation of progress and decline becomes of greater interest from the changes which befell the land as the consequence—its condition alternating between that of a fruitful garden and an arid waste.

The lost fertility of a country, however, is not usually attributable so much to the loss of a special art possessed by its inhabitants as to a general decay in the people's culture and civilization, from causes which are inherent in the civ-

* Tylor, *op. cit.*, pp. 186, 187.

ilization itself. A remarkable illustration of lost fertility of this kind is given by Mr. Marsh in his work, entitled "The Earth as Modified by Human Action." He tells us "that the fairest and fruitfulest provinces of the Roman Empire, precisely that portion of terrestrial surface which, about the commencement of the Christian era, was endowed with the greatest superiority of soil, climate, and position, which had been carried to the highest pitch of physical improvement, and which thus combined the natural and artificial conditions best fitting it for the habitation and enjoyment of a dense and highly-refined and cultivated population, are now completely exhausted of their fertility, or so diminished in productiveness as, with the exception of a few favored oases that have escaped the general ruin, to be no longer capable of affording sustenance to civilized man. If to this realm of desolation we add the now wasted and solitary soils of Persia and the remoter East that once fed their millions with milk and honey, we shall see that a territory larger than all Europe, the abundance of which sustained in by-gone centuries a population scarcely inferior to that of the whole Christian world at the present day, has been entirely withdrawn from human use, or, at best, is thinly inhabited by tribes too few in numbers, too poor in superfluous products, and too little advanced in culture and the social arts to contribute anything to the general moral or material interests of the great commonwealth of man."*

Besides the direct testimony of written history to the ancient fertility of the now exhausted regions which are here referred to—namely, Northern Africa, the great Arabian Peninsula, Syria, Mesopotamia, Armenia, and many other provinces of Asia Minor, Greece, Sicily, and parts even of Italy and Spain—Mr. Marsh points out that "the multitude and extent of yet remaining architectural ruins, and of de-

* Marsh, "The Earth as Modified by Human Action," Lond., 1874, pp. 4, 5.

cayed works of internal improvement, show that at former epochs a dense population inhabited those now lonely districts. Such a population could have been sustained only by a productiveness of soil of which we at present discover but slender traces; and the abundance derived from that fertility serves to explain how large armies, like those of the ancient Persians, and of the Crusaders and the Tartars in later ages, could, without an organized commissariat, secure adequate supplies in long marches through territories which in our times would scarcely afford forage for a single regiment.”*

From all that has been said, I think we can scarcely hesitate to conclude that civilizations are lost as well as gained; that all existing savages possibly are, and that some of them certainly are, in a state of civilization below that which their ancestors occupied; and that there is no intrinsic tendency in human societies separately to pass ever on and ever up to something better, and higher, and nobler.

A state of high civilization is difficult to keep as well as difficult to gain. This is the teaching of facts, and not a speculation. So also it is not a probability, but a well-known fact, that the seats of civilization change. The centres of progress in the world are not always the same. They seem rather to be forever shifting. One nation rises up and another goes down. Empires are founded, flourish, and decay. Where, for example, is that Roman Empire now, which two thousand years ago planted the seeds of a high

* Marsh, *op. cit.*, p. 4.

(NOTE.—In discussing the question, What is civilization? I am sometimes obliged, where quotations are frequent, to use the word civilization without strict regard to what I think its real meaning. I am not able, for instance, always to maintain a distinction between civilization and culture. But I do not think that the argument will suffer by this.)

civilization among the barbarians of Great Britain? It will scarcely, I think, be saying too much, if I say that the British Empire stands now very much where the Roman Empire stood then, and occupies a like dangerous place of breadth and prominence. Where are Nineveh and Babylon, and what is the condition now of those rich garden-lands of which they were the capitals? The learning of the country of the Pharaohs is wiped out and gone; yet Egypt was once the home of the leaders in scientific research. The poor people who squat round the ruins of Copan and Palenque are incapable of understanding how their forefathers erected those marvels of architecture—so great with them is the fall from a high estate. What do we know of the builders of the palaces of Cambodia, except that they must have been a highly civilized and cultured people? Their country is now in the possession of barbarians. Were the provinces of Armenia and Mesopotamia always a fruitless waste? Is it not on the record that they were once the gardens of the world, thickly occupied by a prospering people? If it had not been written on the page of history that they once were so, ruined buildings and works of industry would have revealed the fact. In like manner, we find among the practices, customs, and beliefs of existing savage things which could only have risen when the tribes were associated and subordinate to some common rule—things which are above the level of their present condition, and which seem the outcome of a stronger civilization and a higher culture than now exist among them. These things disclose the falling away from a higher state, though not perhaps from a high state, and they teach the same lessons as are often taught by ruined cities, ruined monuments, or ruined aqueducts.

Taking the whole world into view, it would seem as if there were always nations in it which are losing and nations

which are gaining a high civilization, and as if the seats of culture were forever changing. That this is true of the period with which written or monumental history deals can scarcely be questioned ; and if this be so, have we any right to conclude that it may not be true of all earlier periods ? Are we not bound, on the contrary, to admit that what is certainly true of the later history of man in the world is at least possibly true of his whole history ? In such matters do we not find that the soundest arguments are those which proceed from the known to the unknown ? May it not, therefore, happen that, dealing with the human race as a whole, there never has been a time in its history when there did not occur among men states both of high and of low civilization ? If it should appear that this has always been the case, then is it not also possible that there may never have existed a time in the history of mankind, as a whole, when there were not, among those composing it, persons potentially as good, persons exhibiting as high a capacity, as any among those who now go to make up mankind ? So far as concerns the period which is embraced in history, whether written or read from monuments and relics, I think this may be held as almost certainly true. The master-builders of the Pyramids, for instance, were assuredly capable of fully receiving all the scientific knowledge possessed by Newton, Watt, Thomson, Stephenson, or any such men of modern times ; while Moses, and David, and Homer, and the old Sanserit writers have never been excelled in literature. What in these respects may have been true of the men of the period not embraced in history, we cannot, of course, so surely know ; but we are able to say that all discoveries hitherto made show that the prehistoric man was as good physically as the historic man, and, if the size of the head be taken as the test, as good also intellectually.

8. Do Men in a State of high Civilization show any desire to return to a ruder and simpler life?

It will be admitted that all the things which gather round or grow upon a high state of civilization are not necessarily true parts of it. Some sort of relationship there may be, and perhaps always is, but it is not necessarily a blood relationship. There are various fashions or customs, for instance, which men living in different kinds of civilization agree to adopt and observe. They are often spoken of as *conventionalities*. They occur in every state of civilization, whether high or low, though, of course, they differ greatly in the different states. Perhaps they are not less numerous and binding in states of savagery than they are in states of high civilization. I speak of them as growths on civilization, but they are often considered a true part of it. I think I may almost say that they are sometimes regarded as its chief part and very essence.

I shall deal here with one class only of these growths on civilization, which I take from the every-day life around us, and which I shall sufficiently indicate by saying that they are characterized by a certain *West Endism* or *fine-mannerism*. It is not "*genteel*," "*in good form*," or "*the mode*" to do this or do that, wear this or wear that, or say this or say that. In the matter of dress, for instance, there are many of these conventionalities. It is not necessary to particularize them, because every one will readily understand to what I refer. A score of such things as I have in view will at once suggest themselves as things which cannot be treated with contempt by those who desire to be regarded as among the refined and cultured. They are spoken of as marks of a high civilization, or, by those who do not confound civilization with culture, as differentiators between the cultured and the uncultured.

I neither praise nor condemn these things. It is possible that they may be good, useful, and wise; or they may be absurd, and nonsensical. All I wish to point out here is that, though we tolerate and submit to them, they really constitute a sort of tyranny under which we secretly fret, pining for the chance of a temporary escape. Does not the exquisite of Rotten Row, for instance, weary for his flannel shirt, and shooting-jacket, and hob-nailed boots? Do not bankers and lawyers and doctors sigh for a loose necktie, a soft hat, and a tweed suit? Do not "well-constituted men" want to fish, or shoot, or kill something—themselves, by climbing mountains, when they can find nothing else? In short, does it not appear that these *conventionalities* are irksome, and are disregarded when the chance presents itself? and does it not seem as if there were something in human nature pulling men back to a rude and simple life? Perhaps this only shows itself in regard to those "restraints of refinement" which are not healthy in their nature; and it is not difficult to believe that there may be a want of good health in all mere West End gentilities. It is not the less desirable, however, to inquire whether men sit contentedly and pleasantly under their rule. To find that they do not, I think, adds, on the whole, to the respectability of human nature; but it has an importance in the present discussion, in so far as it seems to show that there are inherent in that nature desires after things which more or less characterize the conditions of savage life, such, for instance, as the love of sport and danger, the enjoyment of a life of liberty in the open air, and the dislike of a polish due to mere varnish. Whatever the significance of the fact may be, it certainly appears that among the highly civilized these "restraints of refinement" are from time to time thrown off as irksome, and are replaced by indulgence in those field-sports and in that free life in the woods

which all savages lead and love. The highly civilized and cultured appear to be drawn toward these things; but the interests, real or supposed, of the association of which they are members practically hinder a free yielding to the inclination.

LECTURE IV.

9. HOW ARE THE GREAT CIVILIZED NATIONS FORMED, AND IN WHAT WAYS MAY CIVILIZATION BECOME SUICIDAL? 10. ARE CIVILIZATIONS OF DIFFERENT PATTERNS, AND WHAT HOPE HAVE WE OF A HIGHER PATTERN THAN ANY YET REACHED?

9. How are the great Civilized Nations formed, and in what ways may Civilization become suicidal?

IN the development of the higher civilizations an important factor is found in that combination or coalescence of aggregates to which allusion has been made. Mr. Spencer, I think, makes this very clear.*

No two societies are or can be identically conditioned. Among the chief causes of the differences, as Mr. Spencer shows, are "the peculiarities of the habitat in respect of contour, soil, climate, flora, fauna, severally affecting, in one mode or other, the (social) activities, whether militant or industrial," and also the "particular organizations and practices of surrounding societies," which must determine the character and extent of the offensive or defensive action for which each society becomes prepared.†

A coalescence of societies must therefore be a combination of dissimilar societies, and when the differences existing in societies which thus coalesce are not too great, they must

* Spencer, *op. cit.*, p. 614.

† *Ibid.*, pp. 590, 591.

be advantageous. Indeed, every prospering or progressing society, however small it be, must be made up of parts which are unlike; and to a certain extent it constitutes a gain, when the number of such unlike parts is increased, as must result from a coalescence of societies which are differently conditioned.

This, indeed, appears to be the very foundation of the division of labor, which can scarcely present itself extensively in societies which are not made up of unlike parts. The members of the great societies formed by a coalescence of small ones are, therefore, likely to be conditioned in a manner more favorable to advancement than the members of small societies. In the co-operation which they display, the division of labor will occur more easily and to a greater extent. The number of separate occupations will be increased, and those who follow them will do so more exclusively.*

Among the results of this, as Mr. Spencer shows, there will be a breaking up of the ruling class into political, religious, and military sections. It will no longer be necessary for the whole society to take a part in wars, either of aggression or defence, or in the preservation of good order within the society. These things will be left to standing armies of soldiers and policemen, and will constitute their sole business. Those, on the other hand, who are concerned in the industrial activities of the society, will be left to follow their various avocations continuously, and to develop that co-operative division of labor which not only adds to productiveness, but actually creates places of fitness for exceptionally constituted members. Such members might not find suitable occupations in smaller societies with simpler

* On this subject see Spencer, *op. cit.*, pp. 491, 614, 617, etc. To show my indebtedness to him, and also to supply a fuller statement of his views, some quotations from his "Principles of Sociology" are given in the Appendix.

organizations, and for want of them they would perish. Thus the law of natural selection is more effectually defeated, and the civilization rises in degree.

IN every society, whatever its size, and whatever the degree and pattern of its civilization, there are what Mr. Spencer designates two leading activities—the militant and the industrial. Among other ways in which these two activities are distinguished from each other there is this—that the first, the militant, involves what has been called a compulsory co-operation, and the second, the industrial, what has been called a voluntary co-operation. It is probably always true that the weaker the militant activity, and the stronger the industrial in any society, the higher is its civilization. This, at least, is almost certainly true of every large and old society. But it happens that in all human societies there are influences at work tending to keep alive and to foster the militant activity; and Mr. Spencer admirably shows that when this does not manifest itself in actual warfare, it may be seen in the tendency to centralized administration and compulsory regulations affecting labor—in other words, in interferences with the voluntariness of co-operation.* It is to this aspect of the militant activity that I desire now briefly to direct attention.

When a society, through its government, interferes with the voluntariness of co-operation, and makes regulations affecting labor, it may be looked on as dictating, in regard to its members, very much as it would if they were soldiers. It charges itself with their bodily welfare and their mental welfare. It leaves little to the free action of the units, controlling that action by all sorts of rules. This is, perhaps, the ripest development of any civilization, but may it not

* Spencer, *op. cit.*, pp. 603–606.

be of the nature of that ripeness which is the precursor of decay?

All sorts of things, great and small, directly or indirectly affecting the voluntariness of individuals, are controlled and regulated by an association which exhibits its tendency to militarism in this way. Poor laws, lunacy laws, and factory acts are passed, and their administration is directed by State officials. Lodging-houses are licensed, and the management of ships and mines is controlled by a central authority. The ignorant are protected against adulterations of their food by public analysts, and the weak are saved by law from overwork. In short, the whole life of the members of the aggregate is taken charge of by the government of the aggregate, just as the individuals of an army are by its commanders.

The civilization of a society must, of course, be high and ripe to make government on these lines possible. Indeed, it is as high a manifestation as we can get of the struggle to defeat the law of natural selection. It is an effort to secure equal advantages for the weak and for the strong, and to reduce to a minimum the disadvantages of stupidity. The aggregate—that is, the State—makes provision for the maimed, the halt, and the blind; for the poor in purse, the sick in body, and the sick in mind; for the thriftless and improvident, that they shall not suffer; for the vicious, that they shall be restrained from sin; for women, that coarse and heavy work shall not be done by them; for children, that they shall do no work till they have reached a certain age; for men, that their hours of work shall be short; and for all, that their food shall be unadulterated, and that the conditions in which they work and live shall be healthy. All these things most clearly tend to control the operation of the law of natural selection. They give to the stupid and the weak some of the advantages which are naturally possessed by the intelligent and strong. They are

special contrivances to prevent survival of the fittest only, and to defeat the law of natural selection. When the government of an aggregate acts thus in many directions, it follows of necessity that the aggregate must possess a high civilization. Such things, indeed, constitute its height. Without them it would be low.

Nevertheless, it is clear that there are many sources of danger to the continued prosperity of a high civilization in which the militant activity of the aggregate is allowed to take the shape in question too strongly. If anything, for example, leads to an undue preponderance of the weak in a society, there may come a time when the material out of which leaders emerge is neither sufficient in quantity nor quality—and without good leaders civilizations can neither arise nor be maintained. In advanced and highly civilized aggregates there exists a class probably even lower than is ordinarily found among the less civilized. These are the dregs of society—the “shots” of the flock—to be found in the slums of great cities. In lower states of civilization such persons, left more to the operation of that natural law from which, in the higher civilizations, they are protected to the utmost, die off and disappear. Fewer of them, at any rate, survive, and the weaker of the weak are those who perish. It thus becomes a question whether the average level of bodily and mental capacity may not be much the same in highly civilized communities and in those with a comparatively low civilization; but whether this be the case or not, it seems almost certain that the range is greater among the highly civilized. Among them we may fairly expect to find a weaker class—just able to survive in consequence of the wider protection given by the aggregate. Indeed, it may perhaps be correctly regarded as an aim of civilization to extend this range; and so long as the extension is brought about by fostering strength as well as by protecting weakness, the attainment of the object may be deemed a gain to the civilization.

But when the efforts are confined to the care and protection of the weak, in such a way as to give scarcely any advantage or help to the strong, then leaders cease to be raised; the range between the highest and lowest is reduced by curtailment at the upper end, and increased solely by extension at the lower, and in this way a cause of decline is introduced into the civilization.

It thus appears that though civilization may be said to rise with the success attending the efforts of a combination of men to defeat the law of natural selection in their case, such a defeat cannot become absolute in any civilization without ultimately involving what may correctly enough be described as the death of that civilization by a sort of suicide.

THERE is another way in which this mode of manifesting the militant activity of aggregates may prove dangerous.

In high civilizations the relations of the State or aggregate to children are apt to be confounded with the strictly parental or family relations. The child, as I have already endeavored to show, is only connected with the State as part of the family. There may be some difficulty in showing when this position ends, and when the child becomes a member of the State;* but it has been well said that it is the interest of the State to foster the parental instincts, and prolong the care taken of offspring. So long as the human being is immature, whether before or after birth, it is and should be, like the young of other animals, protected from the operation of the law of natural selection by the parental instincts. This is the law of the family. It is the law of nature, in regard to the young, that the parents shall be the combatants in the struggle for existence. But the law of

* Spencer, *op. cit.*, p. 795.

nature for the mature is that they themselves shall be the combatants. Each mature individual has to face the struggle for existence, and the fittest are selected for survival. This law, as I have shown, takes effect in the case of man as well as other animals, so long as he acts in isolation. But man always forms combinations for the purpose of defeating the law, and these combinations do for their members, in spite of nature's law, something of what is done for the immature by their parents in consequence of nature's law. The natural law of the family affecting the immature is to some extent introduced into such societies, and extended to the mature—with civilization as the result; but the law of nature for the mature can in no degree whatever be introduced into the family without having the enfeeblement or extinction of the species as the result.*

The immature human being cannot, therefore, without risk, be brought under a rule which merely aims at doing in part that which in its case must be done in whole; and when confusion arises between the policy of the State and the policy of the family in this matter, we have another cause of the breaking up and decay of civilizations.†

These remarks, I need scarcely say, have only reference to broad governmental interference on the part of aggregates, such, for instance, as was involved in the law of Sparta, the motive for which, Plato tells us, lay in the view that children belong less to their parents than to the city or aggregate.‡ They have no application whatever to excep-

* On the relations of the State to children, see Spencer, *op. cit.*, pp. 738-742. Quoted in Appendix.

† I do not overlook the fact that the organization of a high civilization may indirectly give assistance to parents in obeying their instincts and discharging their natural responsibilities. This, however, is not a substitution of national for parental action.

‡ De Coulanges, "The Ancient City," p. 295.

tional circumstances or conditions, such as those in which parental instincts fail, and in which the State properly places itself *in loco parentis*.

10. Are Civilizations of Different Patterns, and what hope have we of a Higher Pattern than any yet reached?

I HAVE repeatedly said that states of civilization present themselves under various forms, or, in other words, assume different patterns. All patterns are the outcome of combinations to defeat the law of natural selection; but the struggles to accomplish this are, in different parts of the world, differently conditioned, and the results vary. The broad results, however, are everywhere substantially the same—that is, through co-operation and the division of labor the general well-being of the aggregate is increased; there is a greater security against destruction by enemies, and a greater power of successfully seizing and appropriating the desirable possessions of others; food, clothing, and shelter are more or less completely assured to the weak as well as to the strong; there are rulers and ruled; the aggregate charges itself with the wrongs done to individuals; the rights of property are recognized, and their defence assumed by the combination; there is a division of labor—one man makes the battle-axe, and another uses it—one man hunts, and another cultivates the ground or tends the flocks; wealth is accumulated, and thus, to some of the aggregate, leisure comes, and with the appearance of leisure culture may be said to begin.* These broad results must appear in every civilization: nevertheless, in countless respects, civilizations differ from each other. No two of them, indeed, are of the same pattern. They have everywhere

* Bancroft, *op. cit.*, vol. ii., p. 42.

much in common; but each is in a certain harmony with its environments, and in no two places are these the same. It is clear, for example, that different patterns of civilization exist at this moment in Europe, China, India, and Japan; while all these differ again from the extinct civilizations of Egypt, Rome, Babylon, Cambodia, and Central America. Nor is it in high civilizations only, such as these are or were, that we find varieties of pattern. The same thing shows itself also in states of civilization which are low, whether they be historic or prehistoric. It is seen, for instance, in the civilizations of the heart of Africa. No one, I think, can read the accounts we have of the countries ruled by Mtessa, Munza, Rumanika, and Kamarasi, without perceiving that each civilization, low though it may be—so low, indeed, as to be properly called savagery*—manifests a dif-

* By savages I understand men who are living remote from, or separate from, their fellow-men—in *the woods*, as the word literally implies—who have not entered into combinations or formed *cities*, and who are, therefore, uncivilized. We have no knowledge, however, of men living in a complete separation—acting independently as individuals. We always find men banded together more or less strongly. When the combination is weak and small, and the consequent state of civilization low, then we have the condition which we actually know and write of as savagery.

The word *savage*, however, has another meaning. From its being observed that savages, or men living in a low state of civilization, are often fierce, cruel, coarse, and uncultured, it has happened that the epithet *savage* has been assumed to have special reference to these qualities, and thus the word has acquired a secondary meaning.

Every member of a highly civilized aggregate or nation must possess the advantages of its civilization. It belongs to *all*, but of course the special environments of some qualify the extent of the possession. The member of the aggregate, for instance, who lives close to a railway-station or telegraph-office has advantages which are not possessed by the member who lives far from them. But it must not be assumed that the civilization of an aggregate is highest in the spots where the population is densest, or that those living sparsely on the outskirts of the territory occupied by a civilized aggregate, and who, from that cause, are not fully reached by some of the advantages of its civilization, are *pro tanto* coarse and uncultured, or living in a state of savagery. In point of

ferent pattern, and that this is not necessarily synonymous with different stages of progress.

These differences of pattern are perhaps accounted for and explained to some extent by differences of race, but there is no good reason for regarding this as a factor of much importance. The environments of a people, on the other hand, are seen to operate powerfully in moulding their civilization. Although the races peopling two such countries as Greenland and India were the same, we could not conceive that civilizations would arise in these countries which would not exhibit strong differences. In two regions so differently conditioned, the struggle to defeat natural selection would necessarily be conducted in very different ways—the forces to be overcome would be different, and the means of overcoming them would be different—the result would be two states of civilization differing from each other in many respects. In both countries a considerable success in defeating the law and a high civilization might be attained; but it might be, on the other hand, that in one or other country the difficulties of the struggle would be so great that nothing more than a small success would be possible, and nothing more than a low civilization attainable. That, for instance, might be true of Greenland, where the environments—the climate, the soil, the flora, the fauna, etc.—would certainly be very hostile to the efforts of any com-

fact, *all* are alike members of the complex and highly-developed organism, and are influenced by its characteristics.

It may sometimes be necessary to the vigor of a civilization that the environments of some members of the aggregate shall be unfavorable as compared with those of others. This may show itself in various ways, and need not involve the living in remote and inaccessible places. The aggregate meets to some extent the special and unfavorable environments of such members by making exceptional provisions and arrangements for their safety and well-being, as it does, for instance, in the case of exceptionally dangerous occupations which are pursued for the general advantage.

These and many other such aspects of the question have not been discussed here, because it did not appear necessary to do so.

bination, even with leaders of mark. There is truth in Bondin's saying that man is to a large extent the expression of the soil on which he lives—meaning by soil the whole surroundings, inclusive of climate; and it may be held as certain that these not only control the rate and degree of civilization, but give it also a pattern or special character.

THE environments of a society, however, are not the only things which mould its civilization. The modifying influence of creeds, beliefs, or superstitions is also very great. Perhaps I shall best succeed in showing the operation of such an influence if I contrast the effects of a religious belief which has a special god for every state or society—a god existing only for it, and giving protection to no other state or society—with a belief which, as De Coulanges says, “presents to the adoration of all men a single God, a universal God, a God who belongs to all, who has no chosen people, and who makes no distinction in races, families, or states.”*

The first of these beliefs is that which is still, and appears in all ages to have been, common among people in states which we describe as barbarous—that is, in states of low civilization. It is, indeed, a mere extension of ancestor-worship, which gives a special god to every family. This only goes a little farther, and gives a special god to every combination of families or *civitas*. Though this form of religious belief, modified in a hundred ways, is generally, perhaps, that of tribes or races which are in a low state of civilization, and which we call barbarous or savage, yet it may also present itself as the belief of a people who have reached a civilization which can only be regarded as high. It was the belief, for instance, of ancient Greece and ancient Rome.

* De Coulanges, op. cit., p. 523.

It is scarcely necessary to point out that such a belief must produce special laws, and originate a special form of government. But it has another product of greater interest here, to which I shall briefly direct attention.

Such a belief necessarily limits human associations, and confines them within a certain area. Where it prevails, the growth and strengthening of states of civilization by the coalescing of societies is practically hindered. Societies in which such a belief exists cannot join together, and, by a combination of their experiences and acquirements, give an immediate advance to the larger society so formed. As is shown by De Coulanges,* these special gods not only protected the people whose they were, but they were hostile to all others, and could not accept adoration from foreigners. The conversion of one society to the creed of another was thus impossible. A State could not give up its gods, nor could the gods give up a State. The connection was not severable. In such circumstances propagandism was not thought of. How could a people, indeed, be asked to join that into which they could not be received, or to leave that to which they were inseparably and supernaturally joined? The idea of gods of tribes necessarily involves the existence of separate tribes, and in that way becomes a hinderance to the growth of civilization by preventing the formation of large associations through the coalescence of smaller ones.

It may be objected to the views now enunciated that great nations have been formed out of societies having these special gods, and the Roman Empire may be instanced. But it must be remembered that this empire was not formed till the labors of philosophers and the consequent decline of the influence of the sacerdotal class had shaken trust in the old faiths. This is well shown by De Coulanges. Though

* De Coulanges, *op. cit.*, pp. 520-523.

many of the ceremonies continued to be observed, the leaders of the people, and eventually the bulk of the people, had ceased to be under the thralldom of the ancient religion.

If we turn now to the other creed, that in which God appears as "a unique, immense, universal being, alone animating the worlds," and standing in exactly the same relation to all the families of men on the earth, we shall find that its influence on the growth and pattern of civilization is quite as great, but very different. We have no longer to deal with the domestic religion of a family, nor with the national religion, if I may so speak, of a city or tribe. This claims to be the religion of the whole human family, and all men under it are equal. The right to practise the worship of this God is not the privilege of any nation, and under it the spirit of propagandism at once takes the place of the spirit of exclusion.*

It seems to me almost unnecessary to point out that a religious belief of this kind, instead of tending to keep societies of men apart, tends strongly to draw them together. The creed is no longer a barrier to union; it becomes an invitation to union. It is impossible not to see how great must be the consequences of a belief like this on the progress and pattern of civilization—how much stronger it tends to make it, and how much farther it tends to carry it.

Is it possible that this faith may some day become universal among men, and that the fruit of it will be a union of unions—combinations and coalescences of great empires—till there is on the whole earth but one people, worshipping one God in one tongue? And would such a change lead to a pattern of civilization higher than any yet attained? I cannot answer these questions; but I think I may safely affirm that under no other faith is such a future possible.

* De Coulanges, *op. cit.*, pp. 521-524.

APPENDIX.

I.

PRIMITIVE LOOM FROM MIDCALDER, EDINBURGH.

FOR WEAVING WAISTBAND TAPE OR TAPE FOR BRACES.

(Page 29, Fig 14.)

THE frame of this loom is composed of a piece of rough wood $3\frac{1}{2}$ feet long, and about 2 inches square, with three uprights fixed on it—one at each end, about 7 inches high, and one in the middle, about 9 inches. The warp is simply tied on one of the end uprights, and is loosened as required. The woven stuff is passed over a pin fixed at right angles near the top of the other end upright, and is kept stretched by having a weight attached to it.

The separation of the threads of the warp, technically called the *shed*, which allows the passage of the shuttle with the weft, is made by each alternate thread of the warp passing over a pin which projects at right angles from near the top of the middle upright, and then through loops of small twine about 3 inches long, and attached to a second pin in the middle upright about $5\frac{1}{2}$ inches below the upper pin. These threads, forming one-half of the warp, are thus, when the web is tightened for weaving, held at a pretty sharp angle, while the loose threads forming the other half of the warp are left free in the natural line of the warp, and can be easily moved up and down to form the shed and allow the passage of the weft. The weft is driven up by a wooden *spatha*, $8\frac{1}{2}$ inches long and $1\frac{1}{2}$ inches broad, shaped somewhat like a table-knife. The shuttle is simply a pin of wood on which the weft is wound.

This loom is the property of the Rev. George Murray, of Balmaclellan. The description of it is written by Mr. John Edward Sibbald, F.S.A., Scot.

II.

THE CRAGGAN IN OLD HIGHLAND TRADITIONS.

(Page 46.)

CAPTAIN THOMAS informs me that the craggan is often mentioned in Highland traditions.

For instance, in one of the "Traditions of the Macaulays," which he has collected and is about to publish, a man is represented as ordering his wife to "milk the cows, which were in the house, into a craggan, and boil it on the fire." In a foot-note referring to this, Captain Thomas says: "The craggan (Krukka. Ied.) is the most primitive form of native pottery in use in the British Isles. Although in general use in the last generation in Skye (Dr. Millar), as well as in the Long Island, it is now only made in the west of Lewis." "The form of the craggan," he adds, "does not differ from the form of clay vessels used by the Zulus now."

III.

SKYE CRAGGANS.

(Page 47.)

In a paper by the Rev. Alexander McGregor, A.M., of Inverness, which was read to the Society of Antiquaries of Scotland this year (1880), it is stated that some of the Skye craggans were large enough to hold three or four gallons. In these large vessels, which Mr. McGregor describes as having flat bottoms, the people are said to have stored their oil. I have never seen craggans either of this size or form, and I think it probable that none of them are now made.

Mr. McGregor says that within the last half-century craggans were largely manufactured in those districts of Skye which yielded a suitable clay. He describes the process of manufacture thus: The first part made was the circular bottom, which was placed on a board or flat stone, and on this the sides, about an inch in thickness, were built up in the desired form. The outside of the craggan was carefully scraped, so as to give it a better appearance. The inside was left untouched, as access to it was difficult. When finished, the craggan was left for some weeks to dry. After it had become sufficiently hard, it was burnt in a peat fire, and during this part of the process was often cracked or broken.

When in The Lewis I frequently heard of these craggans of great size; but it is interesting to have such definite and trustworthy information as to their recent existence. It is also of interest to learn that all craggans were not of the globular shape shown in Figs. 18 to 25, pages 43, 44, 45, and 48.

IV.

THE SHETLAND SNUFF-QUERN.

(Page 53.)

THERE are querns and querns—querns for one purpose, and querns for another—and they are not all the same either in size or construction. The Shetland snuff-quern, for instance, is smaller and simpler than the meal-quern—the comparatively complex arrangements of the latter being not adopted in the case of the snuff-quern, because they were unnecessary, and would in practice have interfered with its utility.

The Shetland snuff-quern, such as was in actual use about fifty years ago, consists of two thin circular stones, one much smaller than the other. The lower or larger stone is about 18 inches in diameter, and about an inch thick. The upper or smaller stone is about 9 inches in diameter, and about three-quarters of an inch in thickness. The lower stone served both as one of the grinding-stones, and as the tray which received the ground tobacco as it escaped from between the two stones. The snuff-quern was generally held on the knee of the grinder, who filled the eye or centre-hole of the upper stone with tobacco leaves, dried in a pan on the fire; and then with a lamb's horn, the point of which was placed in a cup or hollow cut near the edge of the upper stone, he pushed it round. It was prevented from leaving its place on the lower stone by a pivot of iron or wood fixed firmly in a hole in the centre of the lower stone, and passing loosely through the eye or centre-hole of the upper stone. This mill ground fine or coarse according to the rate at which it was fed, and not as the result of any mechanical arrangement.

It is altogether a much ruder piece of machinery than the meal-quern described at page 53; but, nevertheless, it was made by the people who were using, at the time they made it, the more complex quern. They had good and sufficient reasons, however, for adopting the simpler form of mill when they wished to grind tobacco. It suited the purpose better; and that being so, it was wisdom, and not foolishness, to adopt it.

V.

SHETLAND BURSTIN AND HEBRIDEAN GRADDAN.

(Page 64.)

MARTIN, in his "Western Islands" (1703), p. 204, says, "The ancient way of dressing Corn, which is yet us'd in several Isles, is call'd *Graddan*, from the Irish word *Grad*; which signifies quick. A Woman sitting down, takes a handful of Corn, holding it by the Stalks in her left hand, and then sets fire to the Ears, which are presently in a flame; she has a Stick in her right hand, which she manages very dexterously, beating off the Grain at the very Instant, when the Husk is quite burnt, for if she miss of that, she must use the Kiln; but Experience has taught them this Art to perfection. The Corn may be so dressed, winowed, ground, and baked within an Hour after reaping from the Ground. The Oat-bread dressed as above is loosening, and that dress'd in the Kiln Astringent, and of greater strength for Labourers: but they love the *Graddan*, as being more agreeable to their taste."

With reference to this, Captain Thomas, in his "Traditions of the Macaulays," quotes as follows from a correspondent: "I have often seen the above speedy mode of making bread of what was only standing corn a very short time before, in Harris, and both bread and meal are much sweeter to the taste than what is kiln-dried." This is a recent experience and opinion.

Graddan, I am told, is merely the Hebridean variety of the Shetland *Burstin*, which last, Captain Thomas says, he had tasted, but had not relished.

VI.

TOASTING OR BAKING STONES.

(Page 93.)

THERE is a stone object, unnoticed in the lectures, which not long ago was common in some parts of Scotland, but which has now passed completely out of use — so completely that, when one of them was

presented to the National Museum of Antiquities of Scotland in 1876, few persons could tell the purpose for which it had been made. I

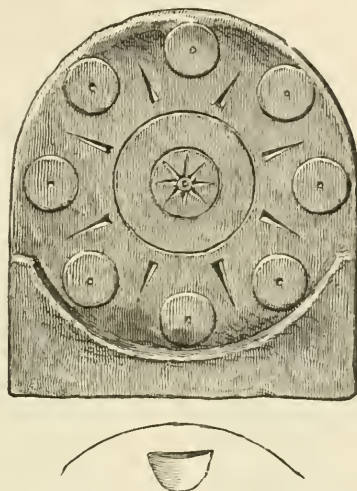


Fig. 137.—Baking or Toasting Stone from Fordoun.

refer to the baking or toasting stone, for toasting oat-cakes before an “open fire”—that is, a fire on the hearth, and not in a grate.

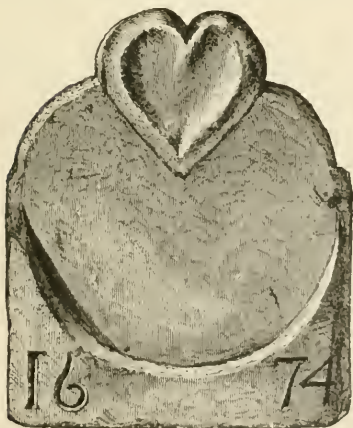


Fig. 138.

Front of Toaster from Clova, Forfarshire.
From a Sketch by Mr. Ower.

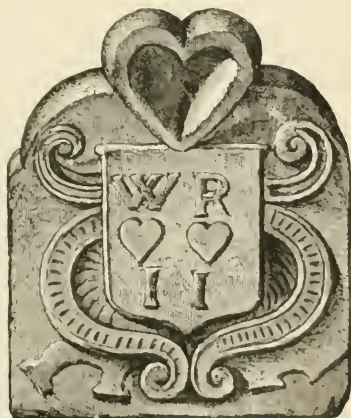


Fig. 139.

Back of Toaster from Clova, Forfarshire.
From a Sketch by Mr. Ower.

The specimen which Mr. Allen Matthewson placed in the Museum is shown in Fig. 137. It is made of red sandstone, and is 13 inches high, $11\frac{3}{4}$ inches wide, and $2\frac{1}{2}$ inches thick at the base. The face of the stone is cut away, so as to leave a semicircular ledge or projection, about an inch wide, on the lower part to support the edge of the cake. The circular space thus formed on the front of the stone, against which the cake rested, is ornamented with a central star, surrounded by a circle, enclosed within a larger star of eight rays. These ornaments are deeply incised. Between each of the rays of the outer star there is a circular wheel-like ornament in relief, about an inch and a half in

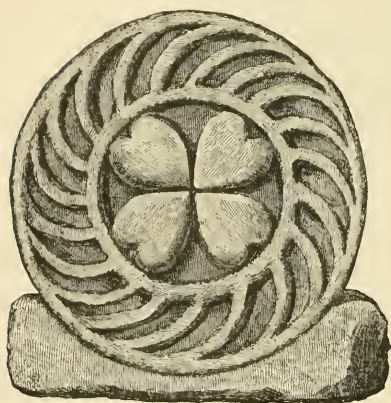


Fig. 140.

Front of Toasting-stone from Fordoun, in the possession of Mr. Sturrock, Dundee. From a Sketch by Mr. Ower.



Fig. 141.

Back of Toasting-stone from Fordoun, Kincardineshire, in the possession of Mr. Sturrock, Dundee. From a Sketch by Mr. Ower.

diameter, with a depression in the centre. The object of this arrangement of raised and depressed ornamentation was doubtless to provide for the escape of the vapor from the back of the cake, generated in the process of firing, and thus to prevent "sweating." On the back of the stone, about an inch and a half under the middle of the top, there is a depression cut in the stone, shown underneath the woodcut, by which it was lifted. This specimen was found at Fordoun, in Kincardineshire.*

Another specimen of a stone toaster was placed in the Museum in 1878 by Mr. Lumsden, of Clova. In general form it resembles the specimen just noticed, but it is without ornamentation. On the pro-

* See "Proc. of Soc. of Antiq. of Scot.," vol. xi., p. 351.

jecting part at the bottom it bears the date 1786. It was found at Clova, in Aberdeenshire.*

In the Dundee Museum there is a highly decorated specimen, the front and back of which I am able, through the kindness of Mr. Matthewson, to show in Figs. 138 and 139. It bears the date 1674, but it is known to have been actually used by the mother of the lady who gave it to the Museum. It weighs $17\frac{1}{4}$ lbs., and is $9\frac{1}{2}$ inches wide at the base, and from 14 to 15 inches high. It came from Longforgan, in Perthshire, and is said to have been once the property of a woman who was reputed to be a witch, and who lived in the Carse o' Gowrie.

The two woodcuts sufficiently show the character of this stone. The ledge on which the cake rested is shown in Fig. 138, which represents the front of the stone, or the side exposed to the fire.

The fourth specimen of a toasting-stone which I have to notice is in the possession of Mr. Sturrock, of Dundee, and comes from Fordoun, in Kincardineshire. The front and back of it are shown in Figs. 140 and 141. It weighs 19 lbs., and is about 12 inches high, and 12 inches wide at the base or pedestal, which is about $3\frac{1}{4}$ inches thick. The part bounded by the circle is thinner, being only an inch and a half thick. The usual ledge for supporting the cake appears on the front of the stone, which in this instance, unlike the Longforgan specimen, is more highly decorated than the back. It bears the date 1701.

VII.

THE LATE USE OF STONE CISTS.

(Page 117.)

"I HAVE already alluded to the process of degradation by which the chamber of the cairn was reduced to a simple cist. The cist of the later pagan times was usually so short as to necessitate the doubling up of the body. Even this form, repugnant as it must have been to Christian feelings, furnishes us with one well-authenticated instance of survival. I allude to the remarkable cemetery at Alloa, described by Dr. Stuart, in which a cist, three feet long, had two crosses incised on its cover. The full-length cist of stones (a further degradation) was used in many northern church-yards to a late date. Along the northern and western coasts there are isolated burials of the bodies of shipwrecked sailors, sometimes in considerable groups, in shallow

* See "Proc. of Soc. of Antiq. of Scot.," vol. xii., p. 614.

graves above the beach, in which the bodies have been laid in cists made of flat stones gathered from the neighboring strand. In fact it was the Poor Law Act which, by obliging the Inspector of Poor to defray the expense of a wooden coffin and decent burial for all penniless or friendless unfortunates, finally extinguished in Scotland a custom which had survived, in one form or other, from the time when the first burials were made in its soil.”*

VIII.

THE TINDER-BOX.

(Page 118.)

My attention has been called to an article on “The Production of Fire,” in the *Penny Magazine* for 26th July, 1834, from which the following extract is taken :

“The flint and steel, with the tinder and match, of some kind or other, have long been the instruments of getting a light in the civilized world. . . . Within the present century the aid of chemistry has been called in, . . . and instantaneous lights have become quite common, under the various names of Promethians, lucifers, etc., although, from its superior cheapness, *the tinder-box will probably always keep its place in domestic use.*”

The Italics are mine. They are intended to fix attention on the prophecy with which the quotation ends. No doubt it was thought a very safe prophecy when made. Yet we find it so far from fulfilment that it is now a matter of considerable difficulty to get possession of a tinder-box. In less than half a century the practice of getting fire in this way has entirely died out. It is probable that there were millions of tinder-boxes in the country in 1834, when the writer in the *Penny Magazine* uttered his prediction, but they are now scarce and costly objects, and already they find a place in museums of antiquities.

IX.

WERE THE PEOPLE OF SCOTLAND SAVAGES AT THE TIME OF THE ROMAN INVASION.

(Pages 131, 219, 232.)

I HAVE spoken of the inhabitants of this country as having been, at the time of the Roman invasion, in a state which may be correctly

* Mr. Anderson, “Proc. of Soc. of Antiq. of Scot.,” vol. xi., pp. 369, 370.



Fig. 142.—Roman Sculptured Stone, 34 inches long, found at Arniebog, Cumbernauld, Dumbartonsire.

spoken of as a state of savagery. Mr. Wallace says: "All the evidence we have proves that they were savages, as much so as the South Sea Islanders."* The late Dr. Hunt, however, alleges that this is "not

* "Journal of Anthropol. Soc.," vol. ii., p. 186.

founded on known facts, but on tradition called history. It is brought forward as an argument that the Britons were slaves and savages two

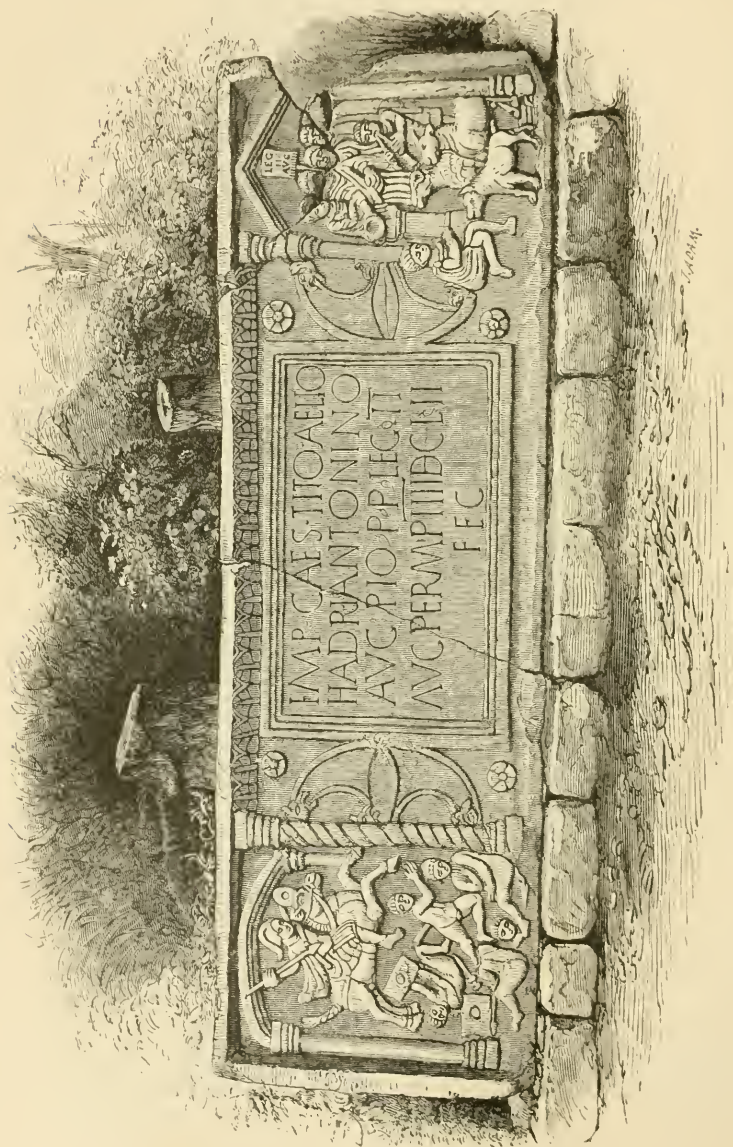


Fig. 143.—Sculptured Roman Legionary Tablet, 9 feet in length, discovered at Curriden, Linlithgowshire.

thousand years ago, and, therefore, that some people that are savages now will in that time be equal to us. But the whole thing is an absurdity, inasmuch as you cannot prove the fact, except on the barest traditional evidence.”* Dr. Hunt appears to have spoken in ignorance when he made this statement, for the opinion referred to rests on evidence furnished by contemporary records. There was a stone, for instance, discovered in 1868 on the farm of Arniebog, in the parish of Cumbernauld, with a figure, assumed to be that of a captive Briton, sculptured on it almost certainly by the Romans themselves while they were still in this country. It is shown in the woodcut, Fig. 142. Dr. Buchanan, of Glasgow, writes thus of it: “The figure of the captive is particularly interesting, for it affords a portrait by Roman hands of a native Briton. He is naked, on one knee, with his hands tied behind his back, as if ready for decapitation. The countenance is that of a young man of about twenty-two years of age; the features not at all savage; the nose good, slightly aquiline; no beard or mustache; the hair rather short, and apparently plaited round the brow; the body plump and muscular; the whole figure exhibiting a strong, well-built man.”†

This, if I am not mistaken, is very much like those descriptions of savages with which we are familiar. At the same time, it is clearly the description of a man who, in the course of time, may cease to be what we call a savage.

On another Roman slab, discovered in the same year at Bridgeness, near Carriden, Linlithgowshire, a group of four captive Britons, one a woman, is represented. Mr. Buchanan describes them thus: “All are naked. Behind them is a Roman soldier on a stallion, fully armed with a helmet, shield, and brandishing a spear. He is galloping among and slaying the captives. One has been decapitated, the head lying beside the body; a second has been thrown on his back, with his feet in the air; a third has been knocked partially down, and is trying to recover himself. The female is sitting with her hands screening her bosom and person.”‡

This remarkable stone is admirably shown in Fig. 143. When it was presented to the Society, Dr. John Alexander Smith drew attention to the interesting representation of the group of armed Caledonians, “naked, as Herodian describes them in his ‘History’—exhibit-

* “Journal of Anthropol. Soc.,” vol. ii., p. 180.

† Buchanan, “Proc. of Soc. of Antiq. of Scot.,” vol. ix., p. 473.

‡ Ibid., vol. ix., p. 476.

ing, probably, their state of comparative barbarism in contrast to Roman civilization.”*

There is still another stone, sculptured by the Romans, and found in Scotland, which represents two Caledonian natives, both naked, and with their arms tied behind their backs. It is in the Hunterian Museum, Glasgow, and is figured in the “Caledonia Romana,” 2d edit., Plate ix., Fig. 1.

With such facts as these before us—and they could easily have been multiplied—it is assuredly wrong to regard, as Dr. Hunt did, the opinion that the ancient Britons were “in a savage state at the time of Julius Cæsar,” as having “only the barest traditional evidence for a foundation.”

X.

THE DISCOVERY OF BRONZE.

(Page 133.)

I HAVE not failed to bear in mind that those discoveries which seem to influence the condition of mankind as a whole are generally the crowning results of many different discoveries, made by many men, working either on the same or on converging lines of research. Sometimes it may even be difficult to say, with reference to any special discovery of this character, what person made it, so near to the making of it may many persons have been. But, nevertheless, the *cope-stone* is usually in practice laid by an individual; and more than this my argument does not assume, and does not require.

The advantages of these discoveries, when they are once made, may be fully accessible to people who are themselves utterly unfit to make them. The possession of such advantages by such people, however, does not occur as a necessary result of their having reached a certain “development”—that is, a certain stage in the growth of their capacity. This is evident from the fact that people of extremely different capacities (and also of extremely different degrees of culture) may possess them.

So far, indeed, as man’s natural history is known, there is nothing to show that he exhibits a growth of capacity which is marked by

* Dr. Smith, “Proc. of Soc. of Antiq. of Scot.,” vol. viii., p. 112.

anything like crises or stages—on reaching one of which, for example, he must necessarily be acquainted with bronze, and on reaching another, with iron. The phenomena of puberty mark a stage or critical epoch in the growth of a girl, but there is nothing to show that man exhibits a growth of capacity marked by crises or stages in any way analogous to this. It can scarcely be doubted, indeed, that the man who is familiar with the uses of iron may sometimes be lower in capacity, and poorer, too, in culture, than the man who never heard of iron.

XI.

GUNPOWDER DISCOVERED IN CHINA.

(Page 133.)

THERE are nations, like the Chinese and Japanese, whose policy shuts off communication with other nations. Great discoveries made by nations so conditioned cannot, of course, spread as they do when made by a cosmopolitan people. So it may have happened that gunpowder was long known only to the Chinese, if, as is sometimes alleged, it was really discovered in China before being discovered in Europe.

Such an exceptional occurrence, however, does not affect my argument.

XII.

THE MIRACLE-STONE OF THE SPEY.

(Pages 161-178.)

THE following account of *The Miracle-stone of the Spey** is given in further illustration of the views expressed in the sixth lecture.

I have collected and given an account of many strange superstitions still existing in remote parts of Scotland,† but I have recorded no such wonderful illustration of a living superstition as that furnished by *The Miracle-stone of the Spey*, which was erected in 1865 close to the

* Taken from "Vacation Notes," by Dr. Arthur Mitchell, "Proc. of Soc. of Antiq. of Scot.," vol. x., 1875.

† "Superstitions relating to Lunacy," by Dr. Mitchell, "Proc. of Soc. of Antiq. of Scot.," vol. iv., 1862.

banks of the river, near the Boat of Garten railway station, and about 150 yards lower down than Tom Bitlae. The legend of the miracle, as it appeared in the *Inverness Courier*,* is as follows:

"In the beginning of the thirteenth century, a certain lady of the family of Mackintosh of Kylachy (a branch of the Mackintoshes of which the late Sir James Mackintosh was the representative, and the best it ever had) was married to one of the eighteen sons of Patrick Grant of Tullochgorum, and grandson of the first Laird of Grant. The laird gave Patrick the farm of Luirg, in Abernethy, as a marriage gift. After many years of domestic happiness Grant died, and was interred in the church-yard of Duthil, and soon after his lady followed him to the grave. The latter, on her death-bed, expressed a wish to be buried in the same tomb with her husband. Her friends represented the impossibility of complying with her desire, as the River Spey could not be forded. 'Go you,' said she, 'to the water-side, and if you proceed to a certain spot (which she indicated—a spot opposite the famous Tom Bitlae, the residence of the once famous Bitlae Cumming), a passage will be speedily effected.' On arriving at the river-side, at the place pointed out, the waters were instantly divided, and the procession walked over on dry ground! The story goes on to say that the people, on observing an immense shoal of fish leaping and dancing in the dry bed of the stream, were tempted to try and capture some of the salmon which thus found themselves so suddenly out of their natural element; but the angry waters refused to countenance the unmerciful onslaught, and returned once more to their channel. That the men thus engaged should have escaped with their lives was considered almost as great a miracle as the former one, and on their coming out of the water, Bitlae and her servants liberally supplied the company with bread and wine, and a 'Te Deum' was sung by the entire multitude for their miraculous deliverance from the perils of the waters. The funeral attendants continued their journey until they reached the summit of the rock immediately above the present farm of Gartenbeg. Here they rested, and erected a pole some thirty feet long, with a finger-board on the top pointing to the particular spot where the passage was accomplished. Not a vestige of this pole is now to be seen."

This is the quietest and tamest of the many versions of the story

* April, 1865.

which are in circulation. Its defect is that it reveals nothing of the popular belief as to the character and habits of the woman; but it also wants consistency, and is clearly inaccurate as regards dates and persons. For instance, it makes Bigla Cumin to have lived two centuries before she did; and there was assuredly no Grant of Tullochgorum with eighteen sons in the thirteenth century.

It makes the "certain woman" one of the Mackintoshes of Kylachy, but other versions say she belonged to the Mackintoshes only by marriage, her first husband being the Fear-Cyllachie, and her second the Fear-na-Luirgan. She appears, indeed, sometimes as a spinster, sometimes as once a wife, sometimes as twice, sometimes as a Strathdearn and sometimes as a Duthil woman; now as having lived in the thirteenth, then in the fourteenth, then in the fifteenth, then in the sixteenth, then in the seventeenth century—most frequently, I think, in the sixteenth or seventeenth; sometimes as a Mackintosh, sometimes as a Cumin, sometimes as a Macdonald, occasionally as a Grant, but she is generally described in no more definite way than as *a certain woman*. I speak from what I myself heard. In short, the tradition has no fixed form, and the measure of its variations is exceedingly great. I was struck, however, by the fact that in nearly every version of the story there was some incident or bit of description which might be called picturesque or romantic, as well as some happy touch in the way of delineating character. Even in the method of telling the story there was usually an attempt at that art in which Highlanders often so greatly excel.

While in the district I put together the striking portions of all the versions which reached me, introducing details as fully as possible, and carefully omitting nothing which related to character. It is unnecessary to give this version here. It makes the miracle a comparatively late event—not earlier than the sixteenth or beginning of the seventeenth century. It attempts to disclose the peculiar character of the woman's saintliness, and so helps to a right understanding of the action taken in regard to her by such persons as THE MEN of Duthil. Perhaps, however, we need nothing more to help us in this than the knowledge of the fact that she is commonly known as HOLY MARY OF LUIG.

The legend fell asleep till a small farmer at Slock, called William Grant, some years before his death, began to speak of erecting a stone to commemorate the miracle. This Grant was one of those religious leaders of the people who are known as THE MEN, and who have

their stronghold in Sutherland and Ross-shire, though they have also long been a power in this particular parish. Grant of Slock was in the front rank of THE MEN,* and, according to the belief of many, was gifted not only with the spirit of prophecy, but with that of second sight.† Some days before his death he is said to have expressed a desire that a monumental stone, which years before he had procured for the purpose, should be erected to commemorate and indicate the place of the dividing of the waters; and he instructed his followers to place on the stone a suitable inscription, both in English and Gaelic. He is also said to have predicted at the same time that two broom bushes would spring up, one on each side of the stone, and eventually cover it, and that it would be a day of trouble to Scotland when this took place.

Grant's followers faithfully carried out the instructions of their leader, and, on the 9th of March, 1865, the stone was erected, an appropriate inscription to the following effect having been previously cut on it:

“Erected at the request of the late William Grant Slock for a memorial of a signal manifestation of the divine power in dividing this water and causing a passage whereby the remains of a certain woman were carried over on dry ground.”

In a loving spirit toward Slock's reputation as a prophet, which overrode their patriotism, they are said to have erected the stone between two growing broom bushes.

The ceremony of inauguration has been described as very solemn. It is said that, after devotional exercises, the tablet was consecrated, and dedicated in all time coming as a memorial of the miraculous passage of the Spey.†

It is right, however, to record that the ceremony is not always described as in every respect solemn. It is alleged, for instance, by some that the cart on which the stone was conveyed from Slock to Garten was old and rickety, and broke down by the way; that the horse which was harnessed to it was frail, and not equal to its work

* *The Men* are written about and described in very different ways, as will be seen by consulting the “New Stat. Acc. of Scot.,” vol. “Sutherland,” p. 36; the Rev. Mr. Auld's “Ministers and Men of the North;” and the Rev. Mr. Kennedy's “Apostle of the North.”

† *Inverness Courier*, April, 1865, and *Scotsman*, 21st of April, 1865.

except under constant stimulation; and that the people followed the cart smoking their short black pipes.

Whether these things are wholly or partially true, or not true at all, it is certain that the erection of this memorial-stone was seriously and earnestly gone about as a pious act.

Luckily, in the very year of its erection (1865), I saw the stone, and then made the sketch of it which is given in Fig. 144. Luckily, I say

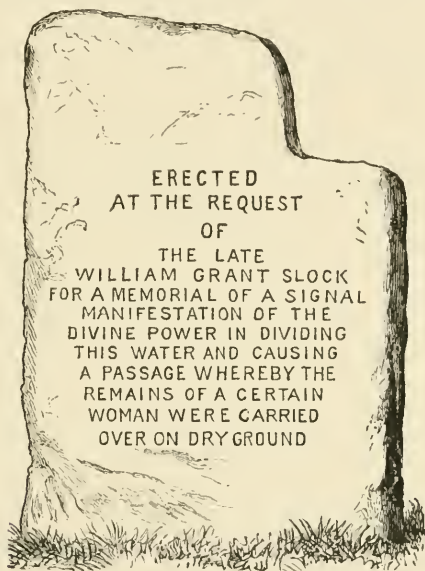


Fig. 144.—The Miracle-stone of the Spey.

—for the stone is now no more. About two years after its erection, on the night of the 19th of February, 1867, it was ruthlessly broken and cast into the river, where the fragments can still be seen when the water is low.

As might be expected, such a thing as the erection of this stone in Scotland, in the nineteenth century, attracted attention, and it was in many quarters freely spoken of as a disgrace to the parish. The outcome of this was a strong local anti-stone party, and a further outcome the destruction of the stone. Who the perpetrators of this "sacrilege" were, no one as yet dare tell. The secret is well preserved, and the iconoclasts are only named as *certain persons*. I was told, however, that one man, suspected to have been of the party, was killed by an accident soon after; and it was undoubtedly meant that

I should understand his death to have been a punishment from God. As a rule, neither the erection nor the destruction of the stone is lightly spoken of; and it appeared to me that the putting up of the monument was seldom quite fearlessly condemned. The tongue seemed to be restrained by something of the nature of a superstitious awe, quite as much as by prudential considerations, though these were no doubt in operation. The Free-Church minister who was in the parish in 1865 is said to have spoken honestly and somewhat strongly, though, perhaps, not altogether wisely, against the putting up of the stone. It is understood that he did not add to his comfort by so doing.

When the river is low, what remains of the stone can be got at, though with some difficulty. It is said that pieces are broken off and preserved as relics or charms. I am even assured that such fragments are to be found in various parts of the northern counties.

There is a story worth recording about the pole which is said to have been placed on the cairn erected at the top of the Garten Hill by those who carried the remains of *Holy Mary* to her grave. My informant was a shrewd and intelligent man, and he vouched for the truth of what he told me as being within his own knowledge.

Fifty years ago and more, he and another boy were herding cattle near Gartenbeg. His companion, in frolic, pulled down the pole, and that afternoon became seriously and strangely ill. The doctor saw him, but could make nothing of the illness. The boy was then urged to tell whether anything had happened to account for his alarming and puzzling condition. He went over all the events of the day, and at length mentioned the pulling down of the pole. The origin of his malady was at once suspected. He was carried to the cairn, and there, in his presence, the pole was replaced. From that moment his disease began to leave him, and he went home whole.

I happened to be inquiring into this legend about the time of the Paray le Monial pilgrimage, and I could not help seeing in *Holy Mary* a Duthil edition of Marguerite Marie Alacoque. The Church set her seal on Marguerite's devotion, and recognized, proclaimed, and recommended it to the faithful. What else did the men of Duthil do but a like thing for another Marie? The journey to Garten with the miracle-stone was in many respects a counterpart of the pilgrimage to Paray. Very different, it is true, was the ceremonial. Only the rough

sons of industry formed the rude procession from Slock. There were no lords and ladies among them. No elegance—no polish—no refinement—no saying of the joyful and the sorrowful and the glorious mystery of the Rosary—no repeating of paters, or of aves, or of litanies of the Sacred Heart—no singing of Magnificats or Te Deums attended the consecration on Speyside of the undressed miracle-stone, with its vulgar inscription, as they did the consecration at Paray of the English people to the Sacred Heart. The two pilgrimages, however, were identical in one respect—they were both the result of earnest religious convictions. Rough though the proceedings were in the one case, and polished in the other, there was no difference between them when regarded as the outcome either of intellectual or of emotional operations. The polish of the Paray ceremonial marked neither a higher order of intellect nor of religious emotion. It marked nothing but a higher general culture, not a higher nature or constitution. The absence of æstheticism and refinement at Duthil resulted from no inferiority either of intellectual powers, or moral qualities, or religious feelings. Those who put up the rude miracle-stone on the Spey were the same people, and lived at the same time, and were under the influence of the same kind of religious belief, as the Pilgrims to Paray.

Perhaps I should go farther, and call to mind that they were the same people as their countrymen and neighbors, who went neither to Garten nor to Paray. Beyond question it would be incorrect to regard them as inferior in mental power to those living round about them, and I doubt if they ought to be considered as in reality more superstitious. Is it not true, to a greater extent than we like to acknowledge, that all of us yield, in our different ways, to superstitious feelings—even at times when we are able to recognize their true nature?

XIII.

THE BURNING OF THE CLAVIE: CARRYING FIRE ROUND BOATS AND FIELDS.*

(Page 163.)

THERE is a superstitious practice still existing at Burghead, which is called *the burning of the clavie*. No account of this curious cere-

* Taken from "Vacation Notes" by Dr. Mitchell, "Proc. of Soc. of Antiq. of Scot.," vol. x., 1875.

mony is so good as that which appeared in the *Banffshire Journal*, and which Mr. Robert Chambers has quoted in his "Book of Days" (vol. ii., p. 789). I reproduce it here almost *in extenso*.*

Mr. Chambers says, "A singular custom, almost unparalleled in any other part of Scotland, takes place on New-year's Eve (old style) at the village of Burghead, on the southern shore of the Moray Firth, about nine miles from the town of Elgin. It has been observed there from time immemorial, and both its origin and that of the peculiar appellation by which it is distinguished still form matter of conjecture and dispute for antiquaries. The following extract from the *Banffshire Journal* presents a very interesting and comprehensive view of all that can be stated regarding this remarkable ceremonial:

"Any Hogmanay afternoon, a small group of seamen and coopers, dressed in blue overfrocks, and followed by numbers of noisy youngsters, may be seen rapidly wending their way to the south-western extremity of the village, where it is customary to build the clavie. One of the men bears on his shoulders a stout Archangel tar-barrel, kindly presented for the occasion by one of the merchants, who has very considerably left a quantity of the resinous fluid in the bottom. Another carries a common herring-cask, while the remainder are laden with other raw materials, and the tools necessary for the construction of the clavie. Arrived at the spot, three cheers being given for the success of the undertaking, operations are commenced forthwith. In the first place, the tar-barrel is sawed into two unequal parts; the smaller forms the groundwork of the clavie, the other is broken up for fuel. A common fir prop, some four feet in length, called the 'spoke,' being then procured, a hole is bored through the tub-like machine that, as we have already said, is to form the basis of the unique structure, and a long nail, made for the purpose, and furnished gratuitously by the village blacksmith, unites the two. Curiously enough, no hammer is allowed to drive this nail, which is 'sent home' by a smooth stone. The herring-cask is next demolished, and the staves are soon undergoing a diminution at both extremities, in order to fit them for their proper position. They are nailed, at intervals of about two inches all

* An excellent notice of the *burning of the clavie* is given in Dr. Maedonald's paper on "The Broch," in the "Proc. of Soc. of Antiq. of Scot.," vol. iv., p. 359. Those who would like to see a pictorial representation of the ceremony will find one executed with much spirit in *The Graphic* of 27th of February, 1875.

round, to the lower edge of the clavic-barrel, while the other ends are firmly fastened to the spoke, an aperture being left sufficiently large to admit the head of a man. Amid tremendous cheering, the finished clavic is now set up against the wall, which is mounted by two stout young men, who proceed to the business of filling and lighting. A few pieces of the split up tar-barrel are placed in a pyramidal form in the inside of the clavic, enclosing a small space for the reception of a burning peat, when everything is ready. The tar, which had been previously removed to another vessel, is now poured over the wood; and the same inflammable substance is freely used, while the barrel is being closely packed with timber and other combustible materials, that rise twelve or thirteen inches above the rim.

“By this time the shades of evening have begun to descend, and soon the subdued murmur of the crowd breaks forth into one loud, prolonged cheer, as the youth who was despatched for the fiery peat (for custom says no sulphurous lucifer, no patent congreve, dare approach within the sacred precincts of the clavic) arrives with his glowing charge. The master-builder, relieving him of his precious trust, places it within the opening already noticed, where, revived by a blast from his powerful lungs, it ignites the surrounding wood and tar, which quickly bursts into a flame. . . . Formerly the clavic was carried in triumph round every vessel in the harbor, and a handful of grain thrown into each, in order to insure success for the coming year; but as this part of the ceremony came to be tedious, it was dropped, and the procession confined to the boundaries of the town. As fast as his heavy load will permit him, the bearer hurries along the well-known route, followed by the shouting Burghadians, the boiling tar meanwhile trickling down in dark, sluggish streams all over his back. Nor is the danger of scalding the only one he who essays to carry the clavic has to confront, since the least stumble is sufficient to destroy his equilibrium. Indeed, this untoward event, at one time looked on as a dire calamity, foretelling disaster to the place, and certain death to the bearer in the course of next year, not unfrequently occurs. Having reached the junction of two streets, the carrier of the clavic is relieved; and while the change is being effected, firebrands plucked from the barrel are thrown among the crowd, who eagerly scramble for the tarry treasure, the possession of which was of old deemed a sure safeguard against all unlucky contingencies. Again the multitude bound along; again they halt for a moment as another individual takes his place as bearer—a post for the honor of which there is no little striving. The circuit of the town being at length

completed, the clavic is borne along the principal street to a small hill near the northern extremity of the promontory called the '*Doorie*,' on the summit of which a freestone pillar, very much resembling an ancient altar, has been built for its reception, the spoke fitting into a socket in the centre. Being now firmly seated on its throne, fresh fuel is heaped on the clavic, while, to make the fire burn the brighter, a barrel with the ends knocked out is placed on the top. Cheer after cheer rises from the crowd below, as the efforts made to increase the blaze are crowned with success.

"Though formerly allowed to remain on the *Doorie* the whole night, the clavic is now removed when it has burnt about half an hour. Then comes the most exciting scene of all. The barrel is lifted from the socket and thrown down on the western slope of the hill, which appears to be all in one mass of flame—a state of matters that does not, however, prevent a rush to the spot in search of embers. Two stout men instantly seizing the fallen clavic, attempt to demolish it by dashing it to the ground: which is no sooner accomplished than a final charge is made among the blazing fragments, which are all snatched up in an incredibly short space of time.

"Up to the present moment, the origin of this peculiar custom is involved in the deepest obscurity."

The main object in the observance of the superstitious ceremony just described was to secure the fruitfulness of the industry of the place—in other words, to secure a good fishing. It acknowledges the existence of a power presiding over, or controlling, increase and fertility.

Of course, as actually observed in our day, it is nothing more, perhaps, than an idle ceremony—an occasion for laughter and frolic—without any meaning soberly attached to it. But, beyond doubt, as once practised, this would be otherwise. Even after all exact knowledge regarding the nature and origin of such a ceremony as the burning of the clavic had been lost, there would naturally remain a real, though not an openly avowed belief, that it concerned the well-being of the community that it should be observed. Believing that this was probably true, it occurred to me that I should find in the Church Records of the district, if those of a sufficiently remote period had been preserved, some evidence of an effort on the part of the Church to suppress the ceremony by punishing those who took part in it. Accordingly, I visited the Rev. James Weir, of Drainie, who is clerk of the Presbytery in which Burghead is situated, and with his help ex-

amined the records. Relevant entries were soon discovered, and these were afterward carefully extracted by Mr. Weir, who found other entries after a more minute search. I had also an opportunity, through the Rev. Dr. Brander and Mr. John Nicoll, of examining the Session Records of the parish of Duffus, in which Burghead is situated, and in these also references to the *clavie* were found. From the Kirk-Session Records of the parish of Inveravon I also obtained an interesting entry through the Rev. Dr. Sellar of Aberlour.

As briefly as I can, I shall indicate the character of the references to the *burning of the clavie* which occur in these Church Records.*

In the first allusion to the superstition in the existing Records of the Presbytery of Elgin (11th of January, 1655), the word *clavie* does not occur. The ceremony is described as the carrying of fir torches about the boats. It is often spoken of much in the same way, both in these Records and in those of the Kirk-Sessions of Drainie and Duffus, even when the word *clavie* occurs. For instance, it is called (23d of December, 1705) the "*practice of carrying lighted clavies or torches about y^e boats,*" or carrying "*a torch off candles about the boats.*"† The people are charged with burning "*their clavies about their boats,*" or with kindling "*a clavie of firre,*" or "*a candle,*" and going about the boats. In one entry the ceremony is described as "*burning torches—crossing the boats therewith ;*" but I do not find anything to show that the use of the word "*crossing*" in this entry had any special significance.‡

* These entries are given *in extenso* in the "Proc. of Soc. of Antiq. of Scot.," vol. x., pp. 652-659. "Vacation Notes," by Dr. Mitchell.

† In this extract, and in most of those which follow, the words contracted or given in obsolete characters are not *written out*—*q* being written for *con*, *y* for *th*, etc. The other signs are used as they appear in the MSS.

‡ In the Church Records the word *clavie* appears to be used as the equivalent of *torch*. It is not probable, however, that these two words are quite synonymous. Perhaps the most likely meaning is that suggested to me by Mr. Anderson. He thinks that it is an old or altered form of *clivic*, which Jamieson gives as a Banffshire word, meaning a *cleft* stick for holding a rush-light. In Shetland the same word takes the shape of *clivin*, the tongs; and Mr. Laursen states that the word is still in use among the fishermen. This makes the etymology of the word plain. The *clavie* would not be the torch, but the thing which carried the torch, or which carried fire in any shape. The Rev. Walter Grigor, of New Pittligo, the author of the "Dialect of Banffshire," informs me that he has "heard the word, but not often, and not for a long time." He says that he has never met it in any ballad or story. He gives me a sketch of an instrument for holding "*fir candles,*" which sufficiently an-

It appears from these records that the burning of the clavie took place “on y^e new yeires even,” or on “y^e last day of Dec^r,” or on “new yeires day.”

It is often spoken of in these records—that is about two hundred years ago—as an “*old*” custom, and is called a “*heathenish and Idolatrous custome*,” a “*Superstitious, Idolatrous, and sinfule custome*,” an “*abominable heathenish practice*,” and a “*great and gross scandall and Idolatrous custome*.”

The religious character of the ceremony is brought out by a statement in one of the entries (3d of February, 1689), that, in addition to carrying fire round the boats, the people “*did carrie meat and drink to the boat side, and did cast drink upon the boat*.” One man is accused of having “*hade a burning clavie paying a superstitious worship, and blessing the boats, after the old hethnisch custome, contrarie to all rules of Christianitie*.” But perhaps this aspect of the matter is best brought out by what is said of the ceremony in the Kirk-Session Records of Inveravon, which I quote below in full:

Extract from the Kirk-Session Records of the Parish of Inveravon.

16th Aug, 1704.

“*Ane Act against Clavies: That whereas it hath been the custome and practise of many in this parish of Inveravon, to goe about y^e foldis and cornes with kindled Torchis of firr, superstitiouslie and Idolatrouslie ascribing y^e power to the fire sanctifying y^e cornes and cattell qch is only proper and peculiar to the true and living God a practise proper rather to the heathens who are ignorant of God than to be practised by them y^e live under the light of the glorious Gospell. Therfor the Session did and hereby doeth enact that whosoever shall be found guiltie of the fors^d superstitious and heathnisch practises shall be proceeded ag^t as scandalous persons and censured according to the demerit of y^e crime and if it shall be found that they be children not capable of Church censure that in y^e case their names*

swers to Jamieson’s description of the *clivie*. A modification of this instrument I myself once saw in actual use in the parish of Keith. I made a sketch of it; but failed to record the name by which it went. Mr. Grigor says it is known as “*the peer man*.”

It has been suggested to me by that distinguished Celtic scholar, Mr. John F. Campbell, that *clavie* may come from the Celtic word *eliabh*, a basket; and certainly the basket-looking instrument in which the fire is now carried at Burghhead gives support to this view of the origin of the word.

be kept in record and they declar'd incapable of any Church-priviledge when arriv'd att the years of discretion or any testimoniall from the Session till they remore the scandull. The Session closed with prayer."

The Presbytery and Kirk-Session Records of Elgin, Drainie, and Duffus show that the burning of the clavic was customary, not in Burghead only, as is generally supposed, but in many, if not in all, of the fishing villages on the Morayshire coast, where the object was "*the blessing of the boats.*" But this extract from the Inveravon Records presents the ceremony to us, under the same name, in a Banffshire parish far inland, and with a similar object—namely, the blessing of the cornfields so as to secure fertility or good crops. Probably further search would disclose that it was at one time, and that perhaps not a very remote time—observed widely in Scotland. From more than one source, indeed, I have heard that the Inveravon practice was common in some districts of Scotland till quite recent times, and something very like it is said to be still customary in parts of Ireland.

The Church seems to have exerted itself to the utmost to "*restrain and suppress*" this "*heathenish custome,*" by severely punishing those who took part in it. Those "*who were found guiltie*" were required to "*make publick acknowledgment off the same before the congregane in sack-cloth, and to stand as many dayes as the Sessiones should Judge fitt.*" On "*accepting and submitting to discipline,*" they were "*sharply rebuked and exhorted to serious repentance.*" Where there was any mitigating circumstance, a fine was sometimes deemed sufficient, after a "*publick profession of repentance.*" But "*those p'sons more in accession in this transgression y^m oys,*" were required to "*satisfy the discipline in sacco,*" "*to testify y^r Repentance by standing at y^e pillar,*" or to stand "*in the Joges two dayes.*" It thus appears that the Church in the seventeenth and eighteenth centuries strongly condemned and very severely punished those who took any part in *the burning of the clavic*, which was openly declared to be, in the opinion of the Church, a worship of *fire*, in which a power was ascribed to *fire* which was "*only proper and peculiar to the true and living God,*" "*a practice proper rather to the heathens*" than to them "*that live under the light of the glorious Gospell.*"* There is no doubt, therefore, as to the serious way in which the Church in former days regarded *the burning of the clavic*. The ceremony is still

* See p. 276.—Extract from the Kirk-Session Records of the parish of Inveravon, 16th of August, 1704.

observed—probably with a higher ritual and greater picturesqueness than ever—but the Church treats the observers with indifference.

XIV.

THE CRADLE-STONE.

(Page 163.)

THERE is another superstitious practice at Burghead, in which, as in *the burning of the clavic*, “a giver of increase” appears to be recognized. It is known as the superstition of the Cradle-stone, and, as now observed, it is entirely childish.*

I first saw the cradle-stone in 1863, and then noted the superstition with which it is connected.

It is a memorial slab built into the wall of the burial-ground called the Chapel-yard, at the south-east corner. It is 35 inches high by 20 inches wide. Close above it, and also built into the wall, there is a hewn lintel-like stone, 37 inches long, by $1\frac{1}{2}$ inches thick. On the narrow exposed face of this stone there is no sculpturing.

The woodcut (Fig. 145) shows the position on the cradle-stone of a cup-like hollow, which is quite round and smooth, and measures 4 inches in width and $2\frac{1}{2}$ inches in depth. This hollow has been produced by the children of Burghead, who are in the habit of striking the spot with a beach-stone (which is also represented in the woodcut), and then quickly putting their ears to the place, when the sound of a rocking cradle and the crying of a child are said to be heard, as if coming from a cavern deep under ground.†

I am told that during last century the stone was not visited by children, but by women, who believed they were to become mothers if they heard the rocking of the cradle and the crying of the child after tapping on the stone.

The *cup* on this stone closely resembles the well-known *cups* described by Sir James Simpson in his “*Archaic Sculptures*.” If it had been found on a rude undressed “monolith,” and if the superstition referred to had entirely died out, there would have been some diffi-

* See “*Vacation Notes*,” by Dr. Mitchell, “*Proc. of Soc. of Antiq. of Scot.*,” vol. x., pp. 645–647.

† The inscription is much worn out by the constant rubbing of the clothes of the children against the stone.

culty in saying that this was not an ordinary *cup-stone*, such as Sir James Simpson has described. I do not mean to imply by this that I think it probable that the *cups* on the stones noticed by him were due to any cause comparable to that which produced the *cup* on the *cradle-stone*, though such a thing is possible, because a *cup* of the size of the one in question may occur singly on a so-called "standing-

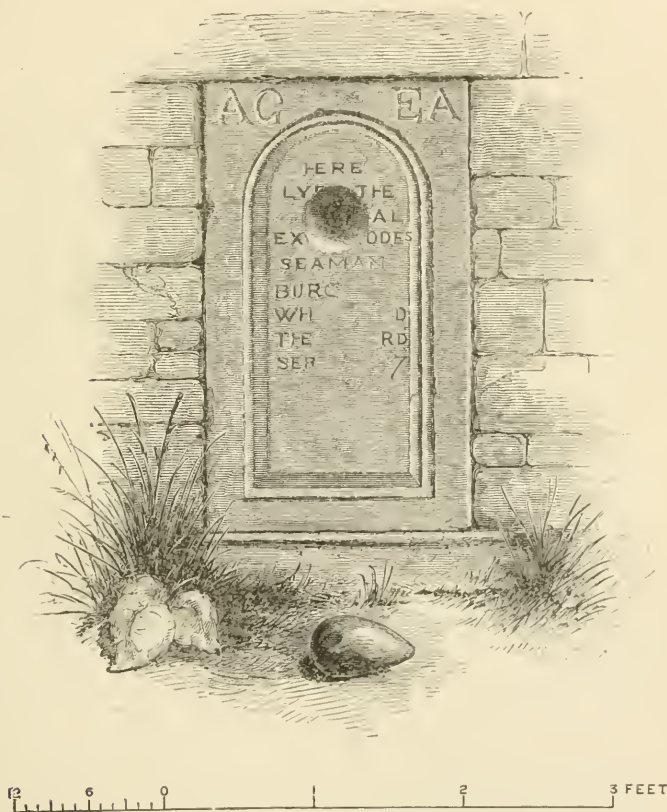


Fig. 145.—Cradle-stone at Birkhead. From a drawing by Mr. James C. Kennedy.

stone," and because in Brittany there are "standing-stones," called "*Pierres Creuses*," which emit a mysterious and bell-like sound on being struck with another stone, and on which a cup-like hollow is formed by repeated blows on one spot.

Cup-stones generally, so far as I am aware, are not associated with superstitions, but it happens in the case of two of them, described as

"situated on a shelving rock on the Loch Avon side of Cairngorm, with hand-made cups on them about a foot wide and correspondingly deep," that "sitting on them is said to be efficacious in cases of barrenness."*

XV.

BURIAL OF A LIVING COCK FOR THE CURE OF EPILEPSY.

(Page 164.)

For the cure of epilepsy there is still practised, in the north of Scotland, what may be called a formal sacrifice.

On the spot where the epileptic first falls a black cock is buried alive, along with a lock of the patient's hair, and some parings of his nails. I have seen at least three epilectic idiots for whose good this is said to have been done. A woman, who assisted at such a sacrifice, minutely described to me the order of procedure. In this instance, in addition to what I have named, three coins were also buried along with the cock.

Dr. G. informs me that some time ago he was summoned to see a poor man who had suddenly died, and who had been subject to epileptic seizures. His friends told Dr. G. that at least they had the comfort of knowing that everything had been done which could have been done. On asking what remedies they had tried, he was told that among other things a cock had been buried alive below the epileptic's bed, and the spot was pointed out. Not many years have elapsed since this sacrifice was openly offered to the demon of epilepsy in an improving town, to which the railway conveys the traveller, and which has six churches and ten schools for a population of about four thousand. The occurrence of such a thing so recently, in a community so privileged, is certainly a marvel deserving of record. An old fisherman was asked by Dr. G. if he knew of other cases in which this heathenish ceremony had been performed, and he at once pointed out two spots on the public road or street where epileptics had fallen, and where living cocks had been cruelly buried to appease the power which had struck them down.†

* "Proc. of Soc. of Antiq. of Scot.," vol. x., p. 645.

† Taken from Paper on Superstitions relating to Lunacy, by Dr. Mitchell, "Proc. of Soc. of Antiq. of Scot.," vol. iv.

I have nearly always found that the people who had performed this ceremony hesitated to speak of it with freedom, and the same may be said of all such superstitions among the Highlanders. "*Si de veritate scandalum sumitur, utilius permittitur nasci scandalum, quam ut veritas relinquatur.*"

XVI.

INNIS MAREE.

SACRIFICE OF BULLS,—VIRTUE-WELLS RESORTED TO FOR THE CURE OF LUNACY.

(Page 165.)

[THE following account of Innis Maree, which is taken from a paper on the "Superstitions of the West Highlands of Scotland" ("Proc. of Soc. of Antiq. of Scot.," vol. iv.), is intended to show, more fully than is done in the sixth lecture, what we know of the recent sacrifice of bulls in Scotland. It will be useful, also, from the reference in it to a virtue-well on the island, which was resorted to for the cure of lunacy.]

In the autumn of last year (1859), while in the neighborhood of Loch Maree, which has been well described, "in its barrenness and loneliness, as the most utterly savage and terrific of any part of this land of mountain and flood,"* I heard much of the marvellous virtues of a well on one of the smallest of the many richly wooded islands which rise in clusters out of its waters, and which so soften the grandeur and wildness of the scene as to make the eye resting on that part of the loch see nothing there but an exquisite picture of calm beauty. So much was told to me of the power "unspeakable in cases of lunacy"† possessed by these waters, that I resolved to satisfy curiosity by a visit.

Eilean Maree, or Innis Maree,‡ is a small, low island, with clean, gravelly shores, about half-way down the loch, not more than a quarter of a mile in its greatest diameter.

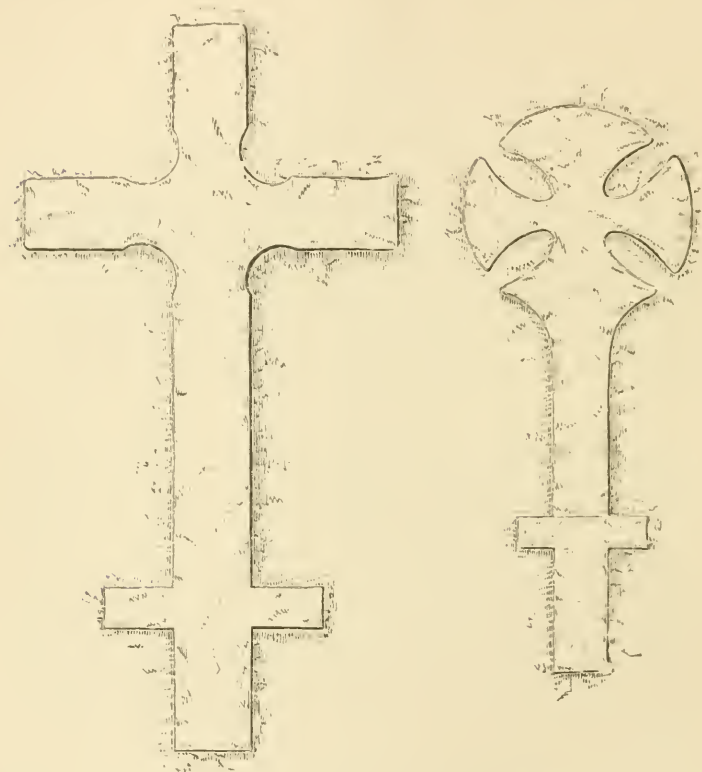
On its highest part there is an enclosure, the outline of which is an irregular oval (90×120 feet). The enclosing wall is not more than two feet high, and is now covered with earth and moss. Pennant, how-

* Anderson's "Highlands," 1834, p. 567.

† Pennant's "Tour in Scotland," 1774, p. 330.

‡ Properly Innis or Eilean Mhaolrùbh.

ever, describes it as a "stone dike, with a regular narrow entrance."* In the centre of this enclosure there are the remains of a small chapel; but so complete is the ruin that it is not possible to determine the style of architecture. Round about the chapel are fifty or sixty graves, most of them covered by flat undressed stones, with rude



Figs. 146 and 147. Crosses on Slabs on Innis Maree.

blocks at the head and feet. With two exceptions, there are no cuttings, carvings, or inscriptions on any of the tombstones. These two have well-formed incised crosses on them, the character of which is shown in Figs. 146 and 147.

The celebrated well is near the shore. At the time of my visit it

* Pennant, *op. cit.*, p. 330.

was dry, and full of last year's leaves. It is a built well, and the flat stone which serves for a cover was lying on the bank.

Near it stands an oak-tree studded with nails. To each of these was originally attached a piece of the clothing of some patient who had visited the island. One had still fastened to it a faded ribbon. Two bone buttons and two buckles were also found nailed to the tree. Countless pennies and half-pennies had been driven edgewise into the wood—over many the bark was closing, over many it had already closed.

Various traditions exist regarding this little island. Several were told to me. A love story is the foundation of all. I shall narrate the one which connects the spot directly with lunacy.

A Norwegian princess awaited the arrival of her lover on Inch Maree, where they were to be married by the hermit. The bridegroom was to land at Poolewe, and on his safe arrival it was agreed that a white flag should be shown. He came, sound in heart and limb, but, out of frolic or to test his sweetheart's love, he caused a black flag to be hoisted. She saw it, and went mad. After a few years she died, and was buried on the island. He outlived her but a short time. The two stones with crosses on them (Figs. 146 and 147) are said to mark their graves.

Since the same tale is told with many variations, it is possible that something of this kind did really happen; but that the virtues of the well have any connection with the story is improbable.

Anderson, Fullarton, the New and Old Statistical Accounts, as well as the people of the place, derive the name of the island from a dedication to St. Mary. This remarkable error is first clearly pointed out in the "*Origines Parochiales*," though Pennant evidently had the right view when he speaks of it as the favored isle of St. Maree, the patron of all the coast from Applecross to Lochbroom, and tells us that *he*, the saint, is held in high esteem, and that the oath of the country is by his name.*

It appears that Maclrubha came from Ireland to Scotland, and founded the Church of Aporcrossan in 673.† After his death he became the patron saint of the district. His name is variously known as Malrubius, Malrube, Mulray, Murie, Mourie, and, as the last corrup-

* Pennant, *op. cit.*, p. 330.

† "*Origines Paroch.*," vol. ii., p. 402; Reeves, *Irish Eccles. Journal*, 1849; and Reeves, "*Proc. of Soc. of Antiq. of Scot.*," vol. iii.

tion, Maree. That the island and loch bear the name of this saint there can be no doubt. Even the mode of pronouncing the word by the Gaelic-speaking population shows that it is not derived from *Mary*; while Pennant's remark proves that the mistake is not yet a century old. Mourie died at Applecross on the 21st of April, 722.* There is some doubt as to where he was buried, and I know of nothing to make it probable that it was on Inch Maree. It is certain, or all but certain, however, that this *Vir Dei* led a hermit's life and wrought miracles there; and that, like St. Goderick, St. Fillan, and many others, he continued to do so after his death.

Whether the Saint, on his arrival in Scotland, found a pagan temple on this little island, or whether he himself first consecrated the spot, is a question of interest. Pennant says, "I suspect the Dike to have been originally Druidical, and that the ancient superstition of paganism was taken up by the Saint as the readiest method of making a conquest over the minds of the inhabitants." This opinion I am inclined to adopt. Tradition, indeed, points to it as a place of worship before the Christian epoch, and the curious record I have obtained of the sacrifice of bulls there supports this belief, and furnishes proof of the liberal engrafting upon Christianity of all forms of paganism in the early history of the Church. The man who accompanied me as driver in the district happened to be a person of intelligence, and it was he who first informed me that in the Presbytery Records allusion was made to the superstitions of Loch Maree. I afterward obtained, through the Rev. Dr. Maclean, of Kiltarn, the extracts from these Records which follow. The more important parts are printed in italics.

"At Appileross 5 Septemb: 1656.

"Convened Mr Joⁿ Mcera, Moderator, Mr Joⁿ Monro, Mr Thomas Hogg, Mr Joⁿ McKillean, Mr Donald Fraser, Mr Donald Mcera, Mr Rorie McKenzie, Mr Alex^r McKenzie, and Mr Donald Ross.

"The name of God Incalled. *Inter Alia*, The Minister being in-

* The extracts from the Presbytery Records, which are afterward given, are of interest, as showing that about the middle of the seventeenth century the Saint's day was, in the district where his Saintship was earned, popularly fixed as the 25th of August, and not the 21st of April or 27th of August. They are further of interest as showing that about the same period St. Rufus and St. Maerubha appear to have been regarded as identical, and that not only was Cronlinbeg formerly called "St. Ruphus's Island," but Innis Maree itself is, in 1678, spoken of as the "Island of St. Rufus."

quired be his brethren of the maine enormities of the parochin of Lochcarrone and Appilcross, declaires some of his parochiners to be superstitious, especiallie in sacrificeing at certaine tymes at the Loch of Mourie, especiallie the men of Auchnaseallach; quho hes beine summoned, cited, bot not compeiring, execution is lawfullie given be the . . . * kirk officer of Lochcarron, quhose names ar as followes: Donald Mcconill chile—Murdo McFerg^{re} vic conill eire—W^m Mcconil eire, Gillipadrick Mcrorie—Duncan Mcconill uayhe vic conill biy—Alex^r Mcfinlay v^c conill diy—Donald Mcaine roy vic choinnich—John Mcconill reach—Murdo Mcaine roy—Murdo Mcaine voire v^c caine ghlaiss—Finlay McGilliphadricke. — Ordaines the kirk officer to chairge these againe to compeire at Dingwall the third Wednesday of October nixt—recommend that thaire Minister compeire the said day at Dingwall, and that he preach at the vacand kirk of Urquhart, the ensuing Lord's day he is in the country.

“The said day the presbytrie of Dingwall, according to the appoyntment of Synode for searcheing and censuring such principalls, and superstitious practices as sould be discovered thaire—haveing mett at Appilcross, and findeing amongst uther abhominable and heathenish practices *that the people in that place were accustomed to sacrifice bulls at a certaine tyme uppon the 25 of August, which day is dedicate, as they conceive, to S^t Mourie, as they call him; and that there were frequent approaches to some ruinous chappels and circulateing of them; and that future events in reference especialle to lyfe and death, in takeing of Journeyis was expect to be manifested by a holl of a round stone quherein they tryed the entering of their heade, which (if they) could doe, to witt be able to put in their heade, they expect thair returning to that place, and failing they considered it ominous; and withall their adoring of wells, and uther superstitious monuments and stones, tedious to rehearse,* Have appoynted as followes—That quhosoever sall be found to commit such abhominations, especiallie Sacrifices of any kynd, or at any tyme, sall publickly appear and be rebuked . . . † six several Lord's dayis in six several churches, viz.: Lochcarron, Appilcross, Contane, Fottertie, Dingwall, and last in Garloch paroch church: and that they may, uppon the delatatione of the Sessione and minister of the parochie, he sall cause summoned the guiltie persone to compeire before the pbrie, to be convinced, rebuked, and there to be injoynd his censure, And withall that the session sould be charged to doe thair dewties in suppressing of the foresaid wickedness, and the foresaid censure in refer-

* Word not legible.

† Ibid.

ence to thair sacrificing to be made use of in case of convict, and appeiring, and evidences of remorse be found, and failing, that they be censured with excommunicatione.—Ordaines the minister to exercise himself with his people in such manner as at his coming to Appilercross, once in the five or sax weekes at each Lord's day of his coming, he stay thrie dayes amongst his people in catechising a pairt of them each day, and that he labour to convince the people of their former error, by evidenceing the hand of God against such abhominations as lies beene practised formerlie.—Appoynts Mr Alexr McKenzie to informe the presbiterie of any strangers that resorts to thease fields as formerlie they have to thair former heathenish practices, that a course may be taken for their restraint.

“KENLOCHIEWE, 9 Sept^r 1656. *Inter alia*, Ordaines Mr Alexr McKenzie, minister at Lochcarron, to cause summond Murdo Mcconill varchue vic conill vic Allister in Torriton, and Donald Smyth in Appilercross, for sacrificing at Appilercross—to compeire at Dingwall the third Wednesday of October, with the men of Auchnascallach.

“The brethren taking to their consideratione the abhominations within the parochin of Garloch *in sacrificing of beasts upon the 25 August, as also in pouring of milk upon hills as oblationes* quhose names ar not particularly signified as yit—referrres to the diligence of the minister to mak search of thease persones and summond them as said is in the former ordinance and act at Appilercross 5 Sept: 1656, and withall that by his private diligence he have searchers and tryers in everie corner of the countrey, especially about the Lochmourie, of the most faithful honest men he can find; and that such as ar his elders be particularly poseit, concerning former practices in quhat they knowe of these *poore ones quho ar called Mourie his devilans and owens thease titles, quho receaves the saerifices and offerings upon the accompt of Mourie his poore ones*; and that at laist some of thease be summoned to compeire before the pbrie the forsaid day, until the rest be discovered; and such as lieve boats about the loch to transport themselves or uthers to the *Ile of Mourie, quherein are monuments of Idolatrie*, without warrand from the superiour and minister towards lawful ends; and if the minister knowes alreaddie any guiltie, that they be cited to the nixt pbrie day and all contraveners thereafter, as occasione offers in all tyme coming.—The Brethren heiring be report that *Miurie hes his monuments and remembrances* in severall paroches within the province, bot more particularly in the paroches of Lochcarron, Lochalse, Kintaile, Contan, and Fottertie, and Lochbroome, It is appoynted that the

brethren of the congregations have a Correspondence, in trying and curbing all such, within their severall congregations. And for these that comes *from forren countreys*, that the ministers of Gerloch and Lochcarron informe themselves of the names of these, and the places of their residence, and informe the pbrrie thereof, that notice may be given to those concerned.

“DINGWALL, 6 August, 1678. *Inter alia*, That day Mr. Roderick Mackenzie, minister at Gerloch, by his letter to the prebrie, declared that he had summoned by his officer to this prebrie day Hector Mackenzie in Mellan in the parish of Gerloch, as also John Murdoch, and Duncan Mackenzies, sons to the said Hector—as also Kenneth McKenzie his grandson, *for sacrificing a bull in ane heathenish manner, in the iland of St Ruffus, commonly called Ellan Moury in Locher, for the recovering of the health of Cirstane Mackenzie*, spouse to the said Hector Mackenzie, who was formerlie sicke and valetudinarie:—Who being all cited, and not compearing, are to be all summoned again pro 2^o.”

KILTEARN, 27th August, 1860.—Extracted from the Old Records of the Presbytery of Dingwall by

ALEX^R. MACLEAN, D.D., *Ply.-Clk.*

I have no earlier allusion to the well on this island than 1656. It was then the resort of the lunatic, and it may possibly have been so from the date of Mourie's arrival, or even before that time. One shrine in Belgium is known to have had a special reputation of this kind for more than 1200 years. I refer to that of St. Dymphna, in Gheel. Our own St. Fillan, also, is said to have been resorted to for the “blessed purpose of conferring health on the *distressed*” since the year 700.*

The most interesting feature of these extracts is the finding so complete and formal a sacrificial ceremony *commonly* practised in our country at so late a period as within two hundred years of our own day.

For the cure of the murrain in cattle, one of the herd is still occasionally sacrificed for the good of the whole. This is done by burying it alive. I am assured that within the last ten years such a barbarism

* John Laurie Buchanan's “Def. of Highlanders,” pp. 163-224.

occurred in the county of Moray.* It is, however, happily, and beyond all doubt, very rare. The sacrifice of a cock, however, in the same fashion, for the cure of epilepsy, is still not unfrequently practised. But in neither of these cases is the sacrifice offered on the shrine of a saint, or to a named God, though, of course, in both there is the silent acknowledgment of a power to be propitiated.

I only know one other recorded instance of the formal sacrifice of a bull in Scotland to a saint on his feast-day. "A writer of the twelfth century, Reginald of Durham, sometimes also called Reginald of Coldingham, takes occasion, in his lively 'Book of the Miracles of St. Cuthbert,' to relate certain incidents which befell the famous St. Aelred of Rievaulx in the year 1164, during a journey into Pictland—that is Galloway, it would seem, or perhaps, more generally, the province of Scotland lying to the south of the Forth or Clyde. The Saintlie Abbot happened to be at 'Cuthbrichtis Kirche,' or Kirkeudbright, as it is now called, on the feast-day of its great patron. A bull, the marvel of the parish for its strength and ferocity, was dragged to the church, bound with cords, to be offered as an alms and oblation to St. Cuthbert."†

It is curious to find, in the inaccessible districts both of the north and south of Scotland, traces of a similar Christianized paganism. Whether these ceremonies are remains of the vague Druidical, or of the Helio-arkite, or of the Mithraic worship, I am not able to say. As regards the last, however, which was set up in opposition to Christianity, and which used many of its ceremonies, it is known that the sacrifice of a bull was one of its rites.‡

It would seem that to some saints the sacrifice of a bull was not

* The *Elgin and Morayshire Courier* of the 24th of May, 1861, in noticing the reading of this paper, has the following editorial remark: "The case referred to by Dr. Mitchell took place not twenty miles from Elgin."

† Joseph Robertson, on "Scholastic Offices in the Scottish Church in the Twelfth and Thirteenth Centuries."—*Miscellany of the Spaulding Club*, v., 56, 57. It is interesting to find that the clerks of the Church—the Scolofthes—who must have been the best informed and most learned, opposed the ceremony, and attempted to throw it into ridicule by proposing to bait the bull—perhaps an indication that opinion was then beginning to change.

‡ *Vide* paper by Meyrick, in the "Archæologia Cambrensis," vol. iii., and Well-beloved's "York."

confined to the day of honor, but was a thing of frequent occurrence. This appears from a letter* on the superstitions of Caernarvonshire of the sixteenth century, in which the writer tells us that he visited the locality where bullocks were said to be offered to St. Beyno, and that he witnessed such an offering in 1589. This Beyno is described as "the saint of the parish of Clynnog, and the chiefest of all saints;" but we are told that the people did not dare to cut down the trees that grew on the saint's grounds, "lest Beyno should kill them, or do them some one harm or another." Though so saintly, therefore, as to be deemed the chiefest of all saints, he was evidently not worshipped solely as a beneficent being, and sacrifices were offered to avert his anger, as well as to secure his favor; thus bringing out his successorship as saint of the place to the demon loci of pure paganism. "They called Barnabas, Jupiter; and Paul, Mercurius;"† and *vice versa*.

Belief in the healing virtues of the well on Inch Maree is still general in Ross-shire, more especially in the western district. The lunatic is taken there without consideration of consent. As he nears the island, he is suddenly jerked out of the boat into the loch; a rope having been made fast to him, he is drawn by this into the boat again, to be a second, third, or fourth time unexpectedly thrown overboard during the boat's course round the island. He is then landed, made to drink of the waters, and an offering is attached to the tree. Sometimes a second and third circumnavigation of the island is thought necessary, with a repetition of the immersions and of the visit to the well.

The writer of the "New Statistical Account," in 1845, says that the poor victim of this superstitious cruelty was towed round the island after the boat by his friends. Macculloch, again, writing in 1824, says, "Here also there was a sacred well in which, as in St. Fillans, lunatics were dipped, with the usual offerings of money; but the well remains, and the practice has passed away." He makes two mistakes here. Lunatics are not and cannot be dipped into the well, which is not larger than a bucket, and both the practice and the well still exist. Pennant describes the ceremony, in 1774, as having a greater show of

* A manuscript formerly in the library of John Anstis, Esq., Garter King of Arms, and printed in the *Collectanea* of Leland, and also in a paper on Welsh Superstitions, by E. L. B. in the "Archæologia Cambrensis," vol. i., 3d series, pp. 235, 236.

† Acts xiv., 12.

religion in the rites, and less barbarity in the form of immersion. According to him, the patient was taken to the "Sacred Island, made to kneel before the altar, where his attendants left an offering in money—he was then brought to the well, sipped some of the holy water, and a second offering was made; that done, he was thrice dipped in the lake, and the same operation was repeated every day for some weeks."*

I did not learn that any form of words is at present in use, nor do any of the writers referred to make mention of such a thing. Nor does it appear that the feast-day of the saint is now regarded as more favorable than any other.

There is an unwillingness to tell a stranger of the particular cases in which this superstitious practice had been tried, but several came to my knowledge. About seven years ago a furious madman was brought to the island from a neighboring parish. A rope was passed round his waist; and with a couple of men at one end in advance, and a couple at the other behind, he was marched to the loch side, and placed in a boat, which was pulled once round the island, the patient being jerked into the water at intervals. He was then landed, drank of the water, attached his offering to the tree, and, as I was told, went home in a state of happy tranquillity.

The last case of which I heard came from a parish in the east of Ross, and was less happy in its issue. It was that of a young woman, who is now (1860) in one of our asylums.

Another case was reported in the *Inverness Courier* of the 4th of November, 1852, and is quoted at length by Dr. Reeves in his paper on Saint Maelrubha.†

XVII.

CULTURE AND THE WANT OF IT IN THE SAME MAN: THE PRODUCTS OF HIGH CIVILIZATIONS DO NOT SHOW A COMPLETE HARMONY OR FREEDOM FROM INCONSISTENCY.

(Page 165.)

THE following woodcut furnishes a curious illustration of the way in which the evidence of culture may coexist with what we commonly accept as an evidence of the want of it.

* Pennant, *op. cit.*, p. 330.

† See "Proc. of Soc. of Ant. of Scot.," vol. iii., p. 288.

It is taken from a *rubbing* of a grave-slab, in the burial-ground of the Elgin Cathedral, on which a death in 1603 is recorded.



Fig. 148.—Death's Head and Motto from a Grave-slab in the Burial-ground of Elgin Cathedral.

Both the motto and the lettering represent a fair degree of culture, far above that of any people whom we could call *savage*.

But the Death's Head, however looked at, is just such a thing as we might believe to be the work of an uncultured savage. It is coarse and brutal in idea; and in execution it is much poorer than many sculpturings known to be the work of the lowest savages in the world.

The repulsive and rudely executed Death's Head and the well-lettered motto are synchronous, but they look as if they had got together by some great mistake. They indicate two states of culture very remote from each other, but in point of fact they coexisted in one man.

XVIII.

THE "WILD AND MEER IRISH."

[Extracts from Fynes Moryson's "Description of Ireland," Dublin, 1735, vol. ii., pp. 372-378.]

THEY "sleep under the canopy of heaven, or in a poor house of clay, or in a cabin made of the boughs of trees, and covered with turf, for

such are the dwellings of the very lords among them; and in such places they make a fire in the midst of the room, and round about it they sleep upon the ground, without straw or other thing under them, lying all in a circle about the fire, with their feet toward it; and their bodies being naked, they cover their heads and upper parts with their mantles."

"The foresaid *wild* Irish do not thresh their oats, but burn them from the straw, and so make cakes thereof."

"They drink milk warmed with a stone first cast into the fire."

"These pieces of flesh, also the entrails of beasts unwashed, they seethe in a hollow tree, lapped in a raw cow's hide, and so set over the fire."

"What do I speak of tables?—since, indeed, they have no tables, but eat their meat upon a bundle of grass."

"At Cork, I have seen with these eyes young maids stark naked, grinding of corn with certain stones to make cakes thereof."

I give these quotations merely to show that, though I have taken my illustrations from Scotland, which I happen to know well, I should probably have found illustrations quite as telling had I gone in quest of them either to Ireland or to England. I do not think I am wrong in saying this of England as well as of Ireland. If they have not been found there, it is probably because they have not been looked for.

XIX.

EXTRACTS FROM MR. ALFRED R. WALLACE'S PAPER ON "THE ORIGIN OF HUMAN RACES, AND THE ANTIQUITY OF MAN DEDUCED FROM THE THEORY OF *NATURAL SELECTION*."

THE following extracts are taken from Mr. Wallace's paper on "The Origin of Human Races, etc.," which appears in the "Journal of the Anthropological Society" for 1864 (vol. ii., p. 158), and which has been well described by Mr. W. R. Greg as "a perfect model of succinct statement and lucid reasoning." They are long, but not longer, I think, than they require to be to disclose correctly his views and the extent of my obligation. I do not reach the conclusions which Mr. Wallace reaches, but I have found his paper full of suggestiveness, and it has furnished me with many arguments, which I have endeavored

to use fairly in my attempt to show the nature and origin of civilization.

“In order to make my argument intelligible, it is necessary for me to explain very briefly the theory of ‘Natural Selection’ promulgated by Mr. Darwin, and the power which it possesses of modifying the forms of animals and plants. The grand feature in the multiplication of organic life is that of close general resemblance, combined with more or less individual variation. The child resembles its parents or ancestors more or less closely in all its peculiarities, deformities, or beauties; it resembles them in general more than it does any other individuals; yet children of the same parents are not all alike, and it often happens that they differ very considerably from their parents and from each other. This is equally true of man, of all animals, and of all plants. Moreover, it is found that individuals do not differ from their parents in certain particulars only, while in all others they are exact duplicates of them. They differ from them and from each other in every particular: in form, in size, in color, in the structure of internal as well as of external organs; in those subtle peculiarities which produce differences of constitution, as well as in those still more subtle ones which lead to modifications of mind and character. In other words, in every possible way, in every organ and in every function, individuals of the same stock vary.

“Now, health, strength, and long life are the results of a harmony between the individual and the universe that surrounds it. Let us suppose that at any given moment this harmony is perfect. A certain animal is exactly fitted to secure its prey, to escape from its enemies, to resist the inclemencies of the seasons, and to rear a numerous and healthy offspring. But a change now takes place. A series of cold winters, for instance, come on, making food scarce, and bringing an immigration of some other animals to compete with the former inhabitants of the district. The new immigrant is swift of foot, and surpasses its rivals in the pursuit of game; the winter nights are colder, and require a thicker fur as a protection, and more nourishing food to keep up the heat of the system. Our supposed perfect animal is no longer in harmony with its universe; it is in danger of dying of cold or of starvation. But the animal varies in its offspring. Some of these are swifter than others—they still manage to catch food enough; some are hardier and more thickly furred—they manage in the cold nights to keep warm enough; the slow, the weak, and the thinly clad soon die off. Again and again, in each succeeding gener-

ation, the same thing takes place. By this natural process, which is so inevitable that it cannot be conceived not to act, those best adapted to live, live; those least adapted, die. It is sometimes said that we have no direct evidence of the action of this selecting power in nature. But it seems to me we have better evidence than even direct observation would be, because it is more universal, viz., the evidence of necessity. It must be so; for, as all wild animals increase in a geometrical ratio, while their actual numbers remain on the average stationary, it follows that as many die annually as are born. If, therefore, we deny natural selection, it can only be by asserting that in such a case as I have supposed, the strong, the healthy, the swift, the well clad, the well organized animals in every respect, have no advantage over, do not on the average live longer, than the weak, the unhealthy, the slow, the ill-clad, and the imperfectly organized individuals; and this no sane man has yet been found hardy enough to assert. But this is not all; for the offspring on the average resemble their parents, and the selected portion of each succeeding generation will, therefore, be stronger, swifter, and more thickly furred than the last; and if this process goes on for thousands of generations, our animal will have again become thoroughly in harmony with the new conditions in which he is placed. But he will now be a different creature. He will be not only swifter and stronger, and more furry, he will also probably have changed in color, in form, perhaps have acquired a longer tail, or differently shaped ears; for it is an ascertained fact that when one part of an animal is modified, some other parts almost always change, as it were, in sympathy with it. Mr. Darwin calls this '*correlation of growth*,' and gives as instances that hairless dogs have imperfect teeth; blue-eyed cats are deaf; small feet accompany short beaks in pigeons; and other equally interesting cases.

"Grant, therefore, the premises: 1st. That peculiarities of every kind are more or less hereditary. 2d. That the offspring of every animal vary more or less in all parts of their organization. 3d. That the universe in which these animals live is not absolutely invariable—none of which propositions can be denied; and then consider that the animals in any country (those at least which are not dying out) must at each successive period be brought into harmony with the surrounding conditions; and we have all the elements for a change of form and structure in the animals, keeping exact pace with changes of whatever nature in the surrounding universe. Such changes must be slow, for the changes in the universe are very slow; but just as these slow changes become important, when we look at results after

long periods of action, as we do when we perceive the alterations of the earth's surface during geological epochs; so the parallel changes in animal form become more and more striking according as the time they have been going on is great, as we see when we compare our living animals with those which we disentomb from each successively older geological formation.

"This is briefly the theory of 'natural selection,' which explains the changes in the organic world as being parallel with, and in part dependent on, those in the inorganic. What we now have to inquire is—Can this theory be applied in any way to the question of the origin of the races of man? or is there anything in human nature that takes him out of the category of those organic existences, over whose successive mutations it has had such powerful sway?

"In order to answer these questions, we must consider why it is that 'natural selection' acts so powerfully upon animals, and we shall, I believe, find that its effect depends mainly upon their self-dependence and individual isolation. A slight injury, a temporary illness, will often end in death, because it leaves the individual powerless against its enemies. If a herbivorous animal is a little sick, and has not fed well for a day or two, and the herd is then pursued by a beast of prey, our poor invalid inevitably falls a victim. So in a carnivorous animal, the least deficiency of vigor prevents its capturing food, and it soon dies of starvation. There is, as a general rule, no mutual assistance between adults, which enables them to tide over a period of sickness. Neither is there any division of labor; each must fulfil *all* the conditions of its existence, and therefore 'natural selection' keeps all up to a pretty uniform standard.

"But in man, as we now behold him, this is different. He is social and sympathetic. In the rudest tribes the sick are assisted at least with food; less robust health and vigor than the average does not entail death. Neither does the want of perfect limbs or other organs produce the same effects as among animals. Some division of labor takes place; the swiftest hunt, the less active fish or gather fruits; food is to some extent exchanged or divided. The action of natural selection is, therefore, checked; the weaker, the dwarfish, those of less active limbs or less piercing eyesight, do not suffer the extreme penalty which falls upon animals so defective.

"In proportion as these physical characteristics become of less importance, mental and moral qualities will have increasing influence on the well-being of the race. Capacity for acting in concert, for protection, and for the acquisition of food and shelter; sympathy, which

leads all in turn to assist each other; the sense of right, which checks depredations upon our fellows; the decrease of the combative and destructive propensities; self-restraint in present appetites; and that intelligent foresight which prepares for the future, are all qualities that from their earliest appearance must have been for the benefit of each community, and would, therefore, have become the subjects of 'natural selection.' For it is evident that such qualities would be for the well-being of man; would guard him against external enemies, against internal dissensions, and against the effects of inclement seasons and impending famine, more surely than could any merely physical modification. Tribes in which such mental and moral qualities were predominant would therefore have an advantage in the struggle for existence over other tribes in which they were less developed, would live and maintain their numbers, while the others would decrease and finally succumb.

"Again, when any slow changes of physical geography or of climate make it necessary for an animal to alter its food, its clothing, or its weapons, it can only do so by a corresponding change in its own bodily structure and internal organization. If a larger or more powerful beast is to be captured and devoured, as when a carnivorous animal which has hitherto preyed on sheep is obliged, from their decreasing numbers, to attack buffaloes, it is only the strongest who can hold—those with most powerful claws, and formidable canine teeth, that can struggle with and overcome such an animal. Natural selection immediately comes into play, and by its action these organs gradually become adapted to their new requirements. But man, under similar circumstances, does not require longer nails or teeth, greater bodily strength or swiftness. He makes sharper spears or a better bow, or he constructs a cunning pitfall, or combines in a hunting party to circumvent his new prey. The capacities which enable him to do this are what he requires to be strengthened, and these will, therefore, be gradually modified by 'natural selection,' while the form and structure of his body will remain unchanged. So when a glacial epoch comes on, some animals must acquire warmer fur, or a covering of fat, or else die of cold. Those best clothed by nature are, therefore, preserved by natural selection. Man, under the same circumstances, will make himself warmer clothing, and build better houses; and the necessity of doing this will react upon his mental organization and social condition—will advance them, while his natural body remains naked as before.

"When the accustomed food of some animal becomes scarce or to-

tally fails, it can only exist by becoming adapted to a new kind of food, a food, perhaps, less nourishing and less digestible. 'Natural selection' will now act upon the stomach and intestines, and all their individual variations will be taken advantage of to modify the race into harmony with its new food. In many cases, however, it is probable that this cannot be done. The internal organs may not vary quick enough, and then the animal will decrease in numbers, and finally become extinct. But man guards himself from such accidents by superintending and guiding the operations of nature. He plants the seed of his most agreeable food, and thus procures a supply independent of the accidents of varying seasons or natural extinction. He domesticates animals which serve him either to capture food or for food itself, and thus changes of any great extent in his teeth or digestive organs are rendered unnecessary. Man, too, has everywhere the use of fire, and by its means can render palatable a variety of animal and vegetable substances, which he could hardly otherwise make use of, and thus obtains for himself a supply of food far more varied and abundant than that which any animal can command.

"Thus man, by the mere capacity of clothing himself, and making weapons and tools, has taken away from Nature that power of changing the external form and structure which she exercises over all other animals. As the competing races by which they are surrounded, the climate, the vegetation, or the animals which serve them for food, are slowly changing, they must undergo a corresponding change in their structure, habits, and constitution, to keep them in harmony with the new conditions—to enable them to live and maintain their numbers. But man does this by means of his intellect alone; which enables him with an unchanged body still to keep in harmony with the changing universe.

"From the time, therefore, when the social and sympathetic feelings came into active operation, and the intellectual and moral faculties became fairly developed, man would cease to be influenced by 'natural selection' in his physical form and structure; as an animal he would remain almost stationary; the changes of the surrounding universe would cease to have upon him that powerful modifying effect which it exercises over other parts of the organic world. But from the moment that his body became stationary, his mind would become subject to those very influences from which his body had escaped; every slight variation in his mental and moral nature which should enable him better to guard against adverse circumstances, and com-

bine for mutual comfort and protection, would be preserved and accumulated; the better and higher specimens of our race would therefore increase and spread, the lower and more brutal would give way and successively die out, and that rapid advancement of mental organization would occur which has raised the very lowest races of man so far above the brutes (although differing so little from some of them in physical stature), and, in conjunction with scarcely perceptible modifications of form, has developed the wonderful intellect of the Germanic races." (Pp. 160-164.)

"If these views are correct; if in proportion as man's social, moral, and intellectual faculties became developed, his physical structure would cease to be affected by the operation of 'natural selection,' we have a most important clew to the origin of races; for it will follow that those striking and constant peculiarities which mark the great divisions of mankind could not have been produced and rendered permanent after the action of this power had become transferred from physical to mental variations. They must, therefore, have existed since the very infancy of the race; they must have originated at a period when man was gregarious, but scarcely social, with a mind perceptive but not reflective, ere any sense of *right* or feelings of *sympathy* had been developed in him.

"By a powerful effort of the imagination, it is just possible to perceive him at that early epoch existing as a single homogeneous race without the faculty of speech, and probably inhabiting some tropical region. He would be still subject, like the rest of the organic world, to the action of 'natural selection,' which would retain his physical form and constitution in harmony with the surrounding universe. He must have been even then a dominant race, spreading widely over the warmer regions of the earth as it then existed, and, in agreement with what we see in the case of other dominant species, gradually becoming modified in accordance with local conditions. As he ranged farther from his original home, and became exposed to greater extremes of climate, to greater changes of food, and had to contend with new enemies, organic and inorganic, useful variations in his constitution would be selected and rendered permanent, and would, on the principle of 'correlation of growth,' be accompanied by corresponding external physical changes. Thus arose those striking characteristics and special modifications which still distinguish the chief races of mankind. The red, black, yellow, or blushing white skin; the straight, the curly, the woolly hair; the scanty or abundant beard; the straight

or oblique eyes; the various forms of the pelvis, the cranium, and other parts of the skeleton.

"But while these changes had been going on his mental development had correspondingly advanced, and had now reached that condition in which it began powerfully to influence his whole existence, and would therefore become subject to the irresistible action of 'natural selection.' This action would rapidly give the ascendancy to mind: speech would probably now be first developed, leading to a still further advance of the mental faculties, and from that moment man, as regards his physical form, would remain almost stationary. The art of making weapons, division of labor, anticipation of the future, restraint of the appetites, moral, social, and sympathetic feelings, would now have a preponderating influence on his well-being, and would therefore be that part of his nature on which 'natural selection' would most powerfully act; and we should thus have explained that wonderful persistence of mere physical characteristics, which is the stumbling-block of those who advocate the unity of mankind." (Pp. 165, 166.)

"These considerations, it will be seen, enable us to place the origin of man at a much more remote geological epoch than has yet been thought possible. He may even have lived in the eocene or miocene period, when not a single mammal possessed the same form as any existing species. For, in the long series of ages during which the forms of these primeval mammals were being slowly specialized into those now inhabiting the earth, the power which acted to modify them would only affect the mental organization of man. His brain alone would have increased in size and complexity, and his cranium have undergone corresponding changes of form, while the whole structure of lower animals was being changed. This will enable us to understand how the fossil crania of Denise and Engis agree so closely with existing forms, although they undoubtedly existed in company with large mammalia now extinct. The Neanderthal skull may be a specimen of one of the lowest races then existing, just as the Australians are the lowest of our modern epoch. We have no reason to suppose that mind and brain and skull modification could go on quicker than that of the other parts of the organization, and we must, therefore, look back very far in the past to find man in that early condition in which his mind was not sufficiently developed to remove his body from the modifying influence of external conditions, and the cumulative action of 'natural selection.' I believe, therefore, that there is no

a priori reason against our finding the remains of man or his works in the middle or later tertiary deposits. The absence of all such remains in the European beds of this age has little weight, because as we go farther back in time, it is natural to suppose that man's distribution over the surface of the earth was less universal than at present. Besides, Europe was in a great measure submerged during the tertiary epoch, and though its scattered islands may have been uninhabited by man, it by no means follows that he did not at the same time exist in warm or tropical continents. If geologists can point out to us the most extensive land in the warmer regions of the earth, which has not been submerged since eocene or miocene times, it is there that we may expect to find some traces of the very early progenitors of man. It is there that we may trace back the gradually decreasing brain of former races, till we come to a time when the body also begins materially to differ. Then we shall have reached the starting-point of the human family. Before that period, he had not mind enough to preserve his body from change, and would, therefore, have been subject to the same comparatively rapid modifications of form as the other mammals." (Pp. 166, 167.)

"Here, then, we see the true grandeur and dignity of man. On this view of his special attributes, we may admit that even those who claim for him a position as an order, a class, or a sub-kingdom by himself, have some reason on their side. He is, indeed, a being apart, since he is not influenced by the great laws which irresistibly modify all other organic beings. Nay, more; this victory which he has gained for himself gives him a directing influence over other existences. Man has not only escaped 'natural selection' himself, but he actually is able to take away some of that power from Nature which, before his appearance, she universally exercised. We can anticipate the time when the earth will produce only cultivated plants and domestic animals; when man's selection shall have supplanted 'natural selection;' and when the ocean will be the only domain in which that power can be exerted, which for countless cycles of ages ruled supreme over all the earth." (P. 168.)

"In the latter part of the paper, the argument is the contrast between change of body and change of mind. By the former was meant change of organization, of the limbs particularly, and of other external physical characteristics. By the mind I always include the brain and skull—the organ of the mind—the cranium and the face; and there-

fore, when I afterward contrasted change of external form with change of mind, of course I do not mean to say that the cranium which contains the organ of mind was stationary." (P. 181.)

"Again, no weak animal—no animal born with a sickly constitution—lives to propagate its kind: but man does. Hundreds of weak individuals live to a comparatively healthy and comfortable old age, and have large families. This is a special case, in which man controls nature differently to the animals. He controls nature so much that he is an exception to all the rest of animated beings." (P. 184.)

XX.

EXTRACTS FROM MR. HERBERT SPENCER'S "PRINCIPLES OF SOCIOLOGY."

It would be difficult to write about Civilization from any point of view without frequent reference to Mr. Herbert Spencer, and accordingly the quotations from his work on "The Principles of Sociology"* are numerous in the four Lectures which deal with that subject. I have given them there, however, as briefly as I could; and, therefore, I append the following extracts, in which many of them appear at greater length. Mr. Spencer's own views are thus made clearer, and my obligation to him, at the same time, is more fully disclosed.

"There exist various groups of super-organic phenomena, of which certain minor ones may be briefly noticed here by way of illustration.

"Of such the most familiar, and in some respects the most instructive, are furnished by the social insects. The processes carried on by these show us co-operation, with, in some cases, considerable division of labor; as well as products of a size and complexity far beyond any that would be possible in the absence of united efforts.

"It scarcely needs to particularize these truths as shown us by bees and wasps. All know that these form (though, as we shall presently see, only in a qualified sense) communities—communities such that the units and the aggregates stand in very definite relations. Between the individual organization of the hive-bee and the organization of the

* Second Edition. Lond. and Edin., 1877.

hive as an orderly aggregate of individuals with a regularly-formed habitation, there exists a fixed connection. Just as the germ of a wasp evolves into a complete individual; so does the adult queen-wasp, the germ of a wasp-society, evolve into a multitude of individuals with definitely-adjusted arrangements and activities; that is to say, the growths and developments of these social aggregates have analogies with the growths and developments of the individual aggregates. Though the structures and functions shown us by the community are less specific than those shown us by the individual, yet they are specific in a considerable degree. As evidence that Evolution of this order has here arisen after the same manner as the simpler orders of Evolution, it may be added that, among both bees and wasps, different genera exhibit it in different degrees. From kinds that are solitary in their habits, we pass through kinds that are social in small degrees to kinds that are social in great degrees.

"Among some species of ants the process of Super-organic Evolution is carried much farther—some species, I say; for here, also, we find that unlike stages have been reached by unlike species: the societies they form vary immensely, both in size and complexity. Among the most advanced, division of labor is carried so far that different classes of individuals are structurally adapted to different functions." (Pp. 4, 5.)

"But, though social insects exhibit a kind of evolution much higher than the merely organic—though the aggregates they form simulate social aggregates in sundry ways; yet they are not true social aggregates. The evolution we see in them is, in essential respects, intermediate between the organic and the super-organic, as here to be understood; for each of these societies is in reality a large family. It is not a union among like individuals substantially independent of one another in parentage, and approximately equal in their capacities; but it is a union among the offspring of one mother, carried on, in some cases, for a single generation, and in some cases for more; and from this community of parentage *arises the possibility of classes having unlike structures and consequent unlike functions.* Instead of being allied to the specialization of function which arises in a society, properly so called, the specialization of function which arises in one of these large and complicated insect-families is allied to that which habitually arises between the sexes. For, instead of two kinds of individuals descending from the same parents, there are several kinds of individuals descending from the same parents; and instead of a simple co-op-

eration between two differentiated individuals in the rearing of offspring, there is an involved co-operation among sundry differentiated classes of individuals in the rearing of offspring." (Pp. 6, 7.)

"Some birds form communities in which, beyond mere aggregation, there is a small amount of co-ordination. Rooks furnish the most familiar instance. Among these we see such integration as is implied by the keeping together of the same families from generation to generation, and by the exclusion of strangers. There is some rude form of government, some recognition of proprietorship, some punishment of offenders, and occasionally expulsion of them. A slight specialization is shown in the stationing of sentinels while the flock feeds; and there is usually an orderly action of the whole community in respect of times of going and coming. Clearly there has been reached a co-operation comparable in degree to that shown us by those small assemblages of the lowest human beings in which there exist no governments.

"Gregarious mammals of most kinds display little more than the union of mere association. In the common tendency toward supremacy of the strongest male in the herd, we do, indeed, see a faint trace of governmental organization. Some degree of co-operation is shown, for offensive purposes, by animals that hunt in packs, and for defensive purposes by animals that are hunted; as, according to Ross, by the North American buffaloes, the bulls of which assemble to guard the cows during the calving-season against wolves, bears, or other enemies. Certain gregarious mammals, however, as the beavers, carry social co-operations to a considerable extent; and their joint actions yield remarkable products in the shape of habitations." (Pp. 7, 8.)

"To determine what conceptions are truly primitive would be easy if we had accounts of truly primitive men. But there are sundry reasons for suspecting that existing men of the lowest types, forming social groups of the simplest kinds, do not exemplify men as they originally were. Probably most of them, if not all of them, had ancestors in higher states; and among their beliefs remain some which were evolved during those higher states. While the degradation theory, as currently held, is untenable, the theory of progression, taken in its unqualified form, seems to me untenable also. If, on the one hand, the notion that savagery is caused by lapse from civilization, is irreconcilable with the evidence; there is, on the other hand, inadequate warrant for the notion that the lowest savagery has always been as

low as it is now. It is quite possible, and, I believe, highly probable, that retrogression has been as frequent as progression.

"Evolution is commonly conceived to imply in everything an *intrinsic* tendency to become something higher; but this is an erroneous conception of it. In all cases it is determined by the co-operation of inner and outer factors. This co-operation works changes until there is reached an equilibrium between the environing actions and the actions which the aggregate opposes to them—a complete equilibrium if the aggregate is without life, and a moving equilibrium if the aggregate is living. Thereupon evolution, continuing to show itself only in the progressing integration that ends in rigidity, practically ceases. If, in the case of the living aggregates forming a species, the environing actions remain constant from generation to generation, the species remains constant. If the environing actions change, the species changes until it re-equilibrates itself with them. But it by no means follows that this change in the species constitutes a step in evolution. Usually neither advance nor recession results; and often, certain previously-acquired structures being rendered superfluous, there results a simpler form. Only now and then does the environing change initiate in the organism a new complication, and so produce a somewhat higher type. Hence the truth that, while for immeasurable periods some types have neither advanced nor receded, and while in other types there has been further evolution, there are many types in which retrogression has happened. I do not refer merely to such facts as that the tetrabranchiate Cephalopods, once multitudinous in their kinds, and some of them very large, have now dwindled to a single medium-sized representative; or to such facts as that the highest orders of reptiles, the *Pterosauria* and *Dinosauria*, which once had many genera superior in structure and gigantic in size, have become extinct, while lower orders of reptiles have survived; or to such facts as that in many genera of mammals there once existed species larger than any of their allies existing now; but I refer more especially to the fact that among parasitic creatures we have almost innumerable kinds which are degraded modifications of higher kinds. Of all existing species of animals, if we include parasites, the greater number have retrograded from a structure to which their remote ancestors had once advanced. Often, indeed, progression in some types *involves* retrogression in others. For always the more evolved type, conquering by the aid of its acquired superiority, tends to drive competing types into inferior habitats and less profitable modes of life: usually implying some disuse and decay of the higher powers.

"As with organic evolution, so with super-organic evolution. Though, taking the entire assemblage of societies, evolution may be held inevitable as an ultimate effect of the co-operating factors, intrinsic and extrinsic, acting on them all through indefinite periods of time; yet it cannot be held inevitable in each particular society, or even probable. A social organism, like an individual organism, undergoes modifications until it comes into equilibrium with enviroing conditions; and thereupon continues without further change of structure. When the conditions are changed meteorologically or geologically, or by alterations in the Flora and Fauna, or by migration consequent on pressure of population, or by flight before usurping races, some change of social structure is entailed. But this change does not necessarily imply advance. Often it is toward neither a higher nor a lower structure. Where the habitat entails modes of life that are inferior, some degradation results. Only occasionally is the new combination of factors such as to cause a change constituting a step in social evolution, and initiating a social type which spreads and supplants inferior social types; for with these super-organic aggregates, as with the organic aggregates, progression in some produces retrogression in others: the more evolved societies drive the less evolved societies into unfavorable habitats, and so entail on them decrease of size or decay of structure.

"Direct evidence forces this conclusion upon us. Lapse from higher civilization to lower civilization, made familiar during school-days, is further exemplified as our knowledge widens. Egyptians, Babylonians, Assyrians, Phœnicians, Persians, Jews, Greeks, Romans—it needs but to name these to be reminded that many large and highly-evolved societies have either disappeared, or have dwindled to barbarous hordes, or have been long passing through slow decay. Ruins show us that in Java there existed in the past a more developed society than exists now; and the like is shown by ruins in Cambodia. Peru and Mexico were once the seats of societies large and elaborately organized, that have been disorganized by conquest; and where the cities of Central America once contained great populations carrying on various industries and arts, there are now but scattered tribes of savages. Unquestionably, causes like those which produced these retrogressions have been at work during the whole period of human existence. Always there have been cosmical and terrestrial changes going on, which, bettering some habitats, have made others worse; always there have been over-populations, spreadings of tribes, conflicts with other tribes, and escape of the defeated into localities unfit for

such advanced social life as they had reached; always, where evolution has been uninterfered with externally, there have been those decays and dissolutions which complete the cycles of social changes. That supplanting of race by race, and thrusting into corners such inferior races as are not exterminated, which is now going on so actively, and which has been going on from the earliest recorded times, must have been ever going on; and the implication is that remnants of inferior races, taking refuge in inclement, barren, or otherwise unfit regions, have retrograded.

"Thus, then, the tribes now known as lowest must exhibit some social phenomena which are due, not to causes now operating, but to causes that operated during past social states higher than the present. This *a priori* conclusion harmonizes with the facts; and, indeed, is suggested by facts that are otherwise inexplicable. Take, for example, some furnished by the Australians. Divided into tribes wandering over a wide area, these savages have, notwithstanding their antagonisms, a complex system of relationships, and consequent interdicts on marriage, which could not possibly have been framed by any agreement among them as they now exist; but which are comprehensible as having survived from a state in which these tribes were more closely united, and subordinate to some common rule. Such, also, is the implication of the circumcision, and the knocking out of teeth, which we find among them, as among other races now in the lowest stages; for, when we come hereafter to deal with bodily mutilations, we shall see that they all imply a subordination, political or ecclesiastical, or both, such as these races do not now exhibit.

"Hence, then, a difficulty in ascertaining inductively what are primitive ideas. Of the ideas current among men now forming each of the most rudimentary societies, there are doubtless some which have descended by tradition from a higher state. These have to be discriminated from truly primitive ideas; so that simple induction does not suffice." (Pp. 106-110.)

"Along with that increase of mass caused by union of primary social aggregates into secondary ones, a further unlikeness of parts begins to arise. The holding together of the compound cluster implies a head of the whole as well as heads of the parts; and a differentiation analogous to that which originally produced a chief, now produces a chief of chiefs. Sometimes the combination is made for defence against a common foe, and sometimes it results from conquest by one tribe of the rest. In this last case the predominant tribe, in

the maintenance of its supremacy, develops more highly its military character: so becoming unlike the others.

"How, after such clusters of clusters have been so consolidated that their united powers can be wielded by one governing agency, there come alliances with, or subjugations of, other such compound clusters, ending from time to time in coalescence—how when this happens there results still greater complexity in the governing agency, with its king, local rulers, and petty chiefs—how, at the same time, there arise more marked divisions of classes—military, priestly, slave, etc.—it needs not to point out more specifically. That complication of structure accompanies increase of mass, is sufficiently obvious." (P. 491.)

"Every society has been at each past period, and is at present, conditioned in a way more or less unlike the ways in which others have been and are conditioned. Hence the production of structures characterizing one or other of these opposed types is, in every instance, furthered, or hindered, or modified, in a special manner. Observe the several kinds of causes.

"There is, first, the deeply organized character of the particular race, coming down from those prehistoric times during which the diffusion of mankind and differentiation of the varieties of man took place. Very difficult to change, this must in every case qualify differently the tendency toward assumption of either type.

"There is, next, the effect due to the immediately preceding mode of life and social type. Nearly always the society we have to study contains decayed institutions and habits belonging to an ancestral society otherwise circumstanced; and these pervert more or less the effects of circumstances then existing.

"Again, there are the peculiarities of the habitat in respect of contour, soil, climate, flora, fauna, severally affecting in one mode or other the activities, whether militant or industrious; and severally hindering or aiding, in some special way, the development of either type.

"Yet further, there are the complications caused by the particular organizations and practices of surrounding societies. For, supposing the amount of offensive or defensive action to be the same, the nature of it depends in each case on the nature of the antagonist action; and hence its reactive effects on structure vary with the character of the antagonist. Add to this that direct imitation of adjacent societies is a factor of some moment." (Pp. 590, 591.)

"Small differences, however, seem advantageous. Sundry instances point to the conclusion that a society formed from nearly allied peoples, of which the conquering eventually mingles with the conquered, is relatively well fitted for progress. From their fusion results a community which, determined in its leading traits by the character common to the two, is prevented by their differences of character from being determined in its minor traits—is left capable of taking on new arrangements determined by new influences; medium plasticity allows those changes of structure constituting advance in heterogeneity. One example is furnished us by the Hebrews; who, notwithstanding their boasted purity of blood, resulted from a mixing of many Semitic varieties in the country east of the Nile, and who, both in their wanderings and after the conquest of Palestine, went on amalgamating kindred tribes. Another is supplied by the Athenians, whose progress had for antecedent the mingling of numerous immigrants from other Greek states with the Greeks of the locality. The fusion by conquest of the Romans with other Aryan tribes, Sabini, Sabelli, and Samnites, preceded the first ascending stage of the Roman civilization. And our own country, peopled by different divisions of the Aryan race, and mainly by varieties of Scandinavians, again illustrates this effect produced by the mixture of units sufficiently alike to co-operate in the same social system, but sufficiently unlike to prevent that social system from becoming forthwith definite in structure." (P. 593.)

"Of chief interest to us here are the transformations of the militant into the industrial, and the industrial into the militant. And especially we have to note how the industrial type, partially developed in a few cases, retrogrades toward the militant type if international conflicts recur.

"When comparing these two types, we saw how the compulsory co-operation which military activity necessitates is contrasted with the voluntary co-operation which a developed industrial activity necessitates; and we saw that where the coercive regulating system proper to the one has not become too rigid, the non-coercive regulating system proper to the other begins to show itself as industry flourishes unchecked by war." (P. 600.)

"Akin in spirit is the general sanitary dictation which, extending for these many years, has now ended in the formation of several hundred districts officered by medical men, partly paid by the central government and under its supervision. Within the organization of

the medical profession itself we see a congruous change; independent bodies who give diplomas are no longer to be tolerated, but there must be unification—a single standard of examination. Poor-law administration, again, has been growing more centralized: boards of guardians having had their freedom of action gradually restricted by orders from the Local Government Board. Moreover, while the regulating centres in London have been absorbing the functions of provincial regulating centres, these have in their turn been usurping those of local trading companies: in sundry towns municipal bodies have become distributors of gas and water, and now it is urged (significantly enough by a military enthusiast) that the same should be done in London. Nay, these public agencies have become builders too. The supplying of small houses having, by law-enforced cost of construction, been made unremunerative to private persons, is now in provincial towns to be undertaken by the municipalities; and in London the Metropolitan Board having proposed that the rate-payers should spend so much to build houses for the poor in the Holborn district, the Secretary of State says they must spend more! Of like meaning is the fact that our system of telegraphs, developed as a part of the industrial organization, has become a part of the governmental organization. And then, similarly showing the tendency toward increase of governmental structures at the expense of industrial structures, there has been an active advocacy of State purchase of railways—an advocacy which has been for the present suspended only because of the national loss entailed by purchase of the telegraphs. How pervading is the influence we see in the schemes of a coercive philanthropy, which, invoking State power to improve people's conduct, disregards the proofs that the restrictions on conduct enacted of old, and in later times abolished as tyrannical, habitually had kindred motives. Men are to be made temperate by impediments to drinking—shall be less free than hitherto to buy and sell certain articles. Instead of extending the principle proper to the industrial type of providing quick and costless remedies for injuries, minor as well as major, which citizens inflict on one another, legislators extend the principle of preventing them by inspection. The arrangements in mines, factories, ships, lodging-houses, bakehouses, down even to water-closets in private dwellings, are prescribed by laws carried out by officials. Not by quick and certain penalty for breach of contract is adulteration to be remedied, but by public analyzers. Benefits are not to be bought by men with the money their efficient work brings them, which is the law of voluntary co-operation, but benefits are given irrespective of

effort expended: without regard to their deserts, men shall have provided at the public cost free libraries, free local museums, etc.; and from the savings of the more worthy shall be taken by the tax-gatherer means of supplying the less worthy who have not saved. Along with the tacit assumption that State authority over citizens has no assignable limits, which is an assumption proper to the militant type, there goes an unhesitating faith in State judgment, also proper to the militant type. Bodily welfare and mental welfare are consigned to it without the least doubt of its capacity." (Pp. 604, 605.)

"We saw that societies are aggregates which grow; that in various types of them there are great varieties in the degrees of growth reached; that types of successively larger sizes result from the aggregation and reaggregation of those of smaller sizes; and that this increase by coalescence, joined with interstitial increase, is the process through which have been formed the vast civilized nations.

"Along with increase of size in societies goes increase of structure. Primitive wandering hordes are without established unlikenesses of parts. With growth of them into tribes habitually come some differences, both in the powers and occupations of their members. Unions of tribes are followed by more differences, governmental and industrial—social grades running through the whole mass, and contrasts between the differently occupied parts in different localities. Such differentiations multiply as the compounding progresses. They proceed from the general to the special: first the broad division between ruling and ruled; then within the ruling part divisions into political, religious, military, and within the ruled part divisions into food-producing classes and handicraftsmen; then within each of these divisions minor ones, and so on.

"Passing from the structural aspect to the functional aspect, we note that while all parts of a society have like natures and activities, there is hardly any mutual dependence, and the aggregate scarcely forms a vital whole. As its parts assume different functions they become dependent on one another, so that injury to one hurts others; until in highly-evolved societies general perturbation is caused by derangement of any portion. This contrast between undeveloped and developed societies is due to the fact that with increasing specialization of functions comes increasing inability in each part to perform the functions of other parts.

"The organization of every society begins with a contrast between the division which carries on relations, habitually hostile, with envi-

roning societies, and the division which is devoted to procuring necessities of life; and during the earlier stages of development these two divisions constitute the whole. Eventually there arises an intermediate division serving to transfer products and influences from part to part. And in all subsequent stages evolution of the two earlier systems of structures depends on evolution of this additional system." (Pp. 614, 615.)

"The many facts contemplated unite in proving that social evolution forms a part of evolution at large. Like evolving aggregates in general, societies show *integration*, both by simple increase of mass and by coalescence and re-coalescence of masses. The change from *homogeneity* to *heterogeneity* is multitudinously exemplified; up from the simple tribe, alike in all its parts, to the civilized nation, full of structural and functional unlikenesses beyond enumeration. With progressing integration and heterogeneity goes increasing *coherence*. The wandering group dispersing, dividing, held together by no bonds; the tribe with parts made more coherent by subordination to a dominant man; the cluster of tribes united in a political plexus under a chief with sub-chiefs; and so on up to the civilized nation consolidated enough to hold together for a thousand years or more. Simultaneously comes increasing *definiteness*. Such organization as the primitive horde shows is vague; advance brings settled arrangements that grow slowly more precise; customs pass into laws which, while gaining fixity, also become more specific in their applications to varieties of actions; and all institutions, at first confusedly intermingled, step by step separate, at the same time that each within itself marks off more distinctly its component structures. Thus in all respects is fulfilled the formula of evolution, as a progress toward greater size, coherence, multiformity, and definiteness." (Pp. 617, 618.)

"Already in the more advanced nations, that process which dissolved the larger family aggregates, dissipating the tribe and the gens, and leaving only the family proper, has long been completed; and already there have taken place partial disintegrations of the family proper. Along with changes which, for family responsibility, substituted individual responsibility in respect of offences, have gone changes which, in some degree, have absolved the family from responsibility for its members in other respects. When by Poor Laws public provision was made for children whom their parents did not or could not adequately support, society in so far assumed family functions; as also

when undertaking, in a measure, the charge of parents not supported by their children. Legislation has of late further relaxed family bonds by relieving parents from the care of their children's minds, and, in place of education under parental direction, establishing education under State direction; and where the appointed authorities have found it needful partially to clothe neglected children before they could be taught, and even to whip children by police agency for not going to school,* they have still further substituted for the responsibility of parents a national responsibility. This recognition of the individual, even when a child, as the social unit, rather than the family, has indeed now gone so far that by many the paternal duty of the State is assumed as self-evident; and criminals are called 'our failures.' " (Pp. 737, 738.)

"In Chap. II. were indicated the facts that, with advance toward the highest animal types, there goes increase of the period during which offspring are cared for by parents; that in the human race parental care, extending throughout childhood, becomes elaborate as well as prolonged; and that among the highest members of the highest races it continues into early manhood: providing numerous aids to material welfare, taking precautions for moral discipline, and employing complex agencies for intellectual culture. Moreover, we saw that, along with this lengthening and strengthening of the solicitude of parent for child, there grew up a reciprocal solicitude of child for parent. Among even the highest animals of sub-human types, this aid and protection of parents by offspring is absolutely wanting. In the lower human races it is but feebly marked: aged fathers and mothers being here killed and there left to die of starvation; and it becomes gradually more marked as we advance to the highest civilized races. Are we, in the course of further evolution, to reverse all this? Have those parental and filial bonds which have been growing closer and stronger during the latter stages of organic development suddenly become untrustworthy? and is the social bond to be trusted in place of them? Are the intense feelings which have made the fulfilment of parental duties a source of high pleasure to be now regarded as valueless? and is the sense of public duty to children at large to be cultivated by each man and woman as a sentiment better and more efficient than the parental instincts and sympathies?

"So far from expecting disintegration of the family to go farther,

* See *Times*, 28th of Feb., 1877.

we have reason to suspect that it has already gone too far. Probably the rhythm of change, conforming to its usual law, has carried us from the one extreme a long way toward the other extreme; and a return movement is to be looked for." (Pp. 739, 740.)

"The salvation of every society, as of every species, depends on the maintenance of an absolute opposition between the regime of the family and the regime of the State.

"To survive, every species of creature must fulfil two conflicting requirements. During a certain period each member must receive benefits in proportion to its incapacity. After that period, it must receive benefits in proportion to its capacity. Observe the bird fostering its young or the mammal rearing its litter, and you see that imperfection and inability are rewarded; and that as ability increases, the aid given in food and warmth becomes less. Obviously this law, that the least worthy shall receive most, is essential as a law for the immature: the species would disappear in a generation, did not parents conform to it. Now mark what is, contrariwise, the law for the mature. Here, individuals gain rewards proportionate to their merits. The strong, the swift, the keen-sighted, the sagacious, profit by their respective superiorities—catch prey or escape enemies, as the case may be. The less capable thrive less, and on the average of cases rear fewer offspring. The least capable disappear by failure to get prey or from inability to escape. And by this process is maintained that average quality of the species which enables it to survive in the struggle for existence with other species. There is thus, during mature life, an absolute reversal of the principle that ruled during immature life.

"Already we have seen that a society stands to its citizens in the same relation as a species to its members; and the truth which we have just seen holds of the one holds of the other. The law for the undeveloped is that there shall be most aid where there is least merit. The helpless, useless infant, extremely *exigeant*, must from hour to hour be fed, kept warm, amused, exercised; as during childhood and boyhood the powers of self-preservation increase, the attentions required and given become less perpetual, but still need to be great; and only with approach to maturity, when some value and efficiency have been acquired, is this policy considerably qualified. But when the young man enters into the battle of life, he is dealt with after a contrary system. The general principle now is that the benefits which come to him shall be proportioned to his merits. Though parental

aid, not abruptly ending, may still sometimes soften the effects of this social law, yet the mitigation of them is but partial; and, apart from parental aid, this social law is but in a small degree traversed by private generosity. Then, when middle life has been reached and parental aid has ceased, the stress of the struggle becomes greater, and the adjustment of payment to service more rigorous. Clearly with a society, as with a species, survival depends on conformity to both of these antagonist principles. Import into the family the law of the society, and let children from infancy upward have life-sustaining supplies proportioned to their life-sustaining labors, and the society disappears forthwith by death of all its young. Import into the society the law of the family, and let the life-sustaining supplies be inversely proportioned to the life-sustaining labors, and the society decays from the increase of its least worthy members and disappearance of its most worthy members: it must fail to hold its own in the struggle with other societies, which allow play to the natural law that prosperity shall vary as efficiency.

"Hence the necessity of maintaining this cardinal distinction between the ethics of the Family and the ethics of the State. Hence the fatal result if family disintegration goes so far that family policy and State policy become confused. Unqualified generosity must remain the principle of the family while offspring are passing through their early stages: and generosity, more and more qualified by justice, must remain its principle as offspring are approaching maturity. Conversely, the principle of the society must ever be justice, qualified by generosity in the individual acts of citizens, as far as their several natures prompt; and unqualified justice in the corporate acts of the society to its members. However fitly in the battle of life among adults, the strict proportioning of rewards to merits may be tempered by private sympathy in favor of the inferior; nothing but evil can result if this strict proportioning is so interfered with by public arrangements that demerit profits at the expense of merit." (Pp. 740-742.)

"Already I have given reasons for thinking that the powers and functions of parents have been too far assumed by the State; and that probably a reintegration of the family will follow its present undue disintegration. It seems possible that, from the early form in which social and family organizations are compulsory in character, we are passing through semi-militant, semi-industrial phases, in which the organizations of both State and family are partly compulsory, partly

voluntary, in character; and that along with complete social reintegration on the basis of voluntary co-operation, will come domestic reintegration of allied kind, under which the life of the family will again become as distinct from the life of the State as it originally was. Still, there remain the theoretical difficulties of deciding how far the powers of parents over children may be carried; to what extent disregard of parental responsibilities is to be tolerated; when does the child cease to be a unit of the family and become a unit of the State? Practically, however, these questions will need no solving; since the same changes of character which bring about the highest form of family will almost universally prevent the rise of difficulties which result from characters of lower types proper to lower societies." (P. 759.)

XXI.

EXTRACTS FROM THE SECOND VOLUME OF MR. HUBERT HOWE BANCROFT'S "NATIVE RACES OF THE PACIFIC STATES OF NORTH AMERICA:" LONDON, 1875.

"OFTEN is the question asked, What is civilization? and the answer comes, The act of civilizing; the state of being civilized. What is the act of civilizing? To reclaim from a savage or barbarous state; to educate; to refine. What is a savage or barbarous state? A wild uncultivated state; a state of nature. Thus far the dictionaries. The term civilization, then, popularly implies both the transition from a natural to an artificial state, and the artificial condition attained. The derivation of the word civilization, from *civis*, citizen, *civitas*, city, and originally from *catus*, union, seems to indicate that culture which, in feudal times, distinguished the occupants of cities from the ill-mannered boors of the country. The word savage, on the other hand, from *silva*, a wood, points to man primeval; *silvestres homines*, men of the forest, not necessarily ferocious or brutal, but children of nature. From these simple beginnings both words have gradually acquired a broader significance, until by one is understood a state of comfort, intelligence, and refinement; and by the other, humanity wild and bestial.

"Guizot defines civilization as an 'improved condition of man resulting from the establishment of social order in place of the individual independence and lawlessness of the savage or barbarous life;' Buckle as 'the triumph of mind over external agents;' Virey as 'the

development more or less absolute of the moral and intellectual faculties of man united in society;’ Burke as the exponent of two principles, ‘the spirit of a gentleman and the spirit of religion.’ ‘Whatever be the characteristics of what we call savage life,’ says John Stuart Mill, ‘the contrary of these, or the qualities which society puts on as it throws off these, constitute civilization;’ and, remarks Emerson, ‘a nation that has no clothing, no iron, no alphabet, no marriage, no arts of peace, no abstract thoughts, we call barbarous.’

“Men talk of civilization and call it liberty, religion, government, morality. Now liberty is no more a sign of civilization than tyranny; for the lowest savages are the least governed of all people. Civilized liberty, it is true, marks a more advanced stage than savage liberty; but between these two extremes of liberty there is a necessary age of tyranny, no less significant of an advance on primitive liberty than is constitutional liberty an advance on tyranny. Nor is religion civilization, except in so far as the form and machinery of sacerdotal rites, and the abandonment of feticism for monotheism become significant of intenser thought and expansion of intellect. No nation ever practised grosser immorality, or what we of the present day hold to be immorality, than Greece during the height of her intellectual refinement. Peace is no more civilization than war, virtue than vice, good than evil. All these are the incidents, not the essence, of civilization.

“That which we commonly call civilization is not an adjunct nor an acquirement of man; it is neither a creed nor a polity, neither science nor philosophy nor industry; it is rather the measure of progressive force implanted in man, the general fund of the nation’s wealth, learning, and refinement, the storehouse of accumulated results, the essence of all best worth preserving from the distillations of good and the distillations of evil. It is a something between men, no less than a something within them; for neither an isolated man nor an association of brutes can by any possibility become civilized.

“Further than this, civilization is not only the measure of aggregated human experiences, but it is a living, working principle. It is a social transition; a moving forward rather than an end attained; a developing vitality rather than a fixed entity; it is the effort or aim at refinement rather than refinement itself; it is labor with a view to improvement, and not improvement consummated, although it may be and is the metre of such improvement. And this accords with latter-day teachings. Although in its infancy, and, moreover, unable to ex-

plain things unexplainable, the science of evolution thus far has proved that the normal condition of the human race, as well as that of physical nature, is progressional; that the plant in a congenial soil is not more sure to grow than is humanity with favorable surroundings certain to advance. Nay, more, we speak of the progress of civilization as of something that moves on of its own accord; we may, if we will, recognize in this onward movement the same principle of life manifest in nature and in the individual man.

"To things we do not understand we give names, with which by frequent use we become familiar, when we fancy that we know all about the things themselves. At the first glance civilization appears to be a simple matter; to be well clad, well housed, and well fed, to be intelligent and cultured, are better than nakedness and ignorance; therefore it is a good thing, a thing that men do well to strive for—and that is all. But once attempt to go below this placid surface, and investigate the nature of progressional phenomena, and we find ourselves launched upon an eternity of ocean, and in pursuit of the same occult Cause, which has been sought alike by philosophic and barbaric of every age and nation; we find ourselves face to face with a great mystery, to which we stand in the same relation as to other great mysteries, such as the origin of things, the principle of life, the soul-nature." (Pp. 3-5.)

"The instincts of man's animality teach the organs to perform their functions as perfectly at the first as at the last; the instincts of man's intellectuality urge him on in an eternal race for something better, in which perfection is never attained or attainable; in society we see the constant growth, the higher and yet higher development; now, in this ever-onward movement are there instincts which originate and govern action in the body social as in the body individual? Is not society a bundle of organs, with an implanted Soul of Progress, which moves mankind along in a resistless predetermined march?" (Pp. 19, 20.)

"In the brute creation this element of progress is wanting. The bird builds its nest, the bee its cell, the beaver its dam, with no more skill or elaboration to-day than did the bird or bee or beaver primeval. The instinct of animals does not with time become intellect; their comforts do not increase, their sphere of action does not enlarge. By domestication, stocks may be improved, but nowhere do we see animals uniting for mutual improvement, or creating for themselves

an artificial existence. So in man, whose nature comprises both the animal and the intellectual, the physical organism neither perceptibly advances nor deteriorates. The features may, indeed, beam brighter from the light of a purer intellectuality cast upon them from within, but the hand, the eye, the heart, so far as we know, is no more perfect now than in the days of Adam.

“As viewed by Mr. Bagehot, the body of the accomplished man ‘becomes, by training, different from what it once was, and different from that of the rude man—becomes charged with stored virtue and acquired faculty, which come away from it unconsciously.’ But the body of the accomplished man dies, and the son can in nowise inherit it, whereas the soul of his accomplishments does not die, but lives in the air, and becomes part of the vital breath of society. And, again, ‘power that has been laboriously acquired and stored up as statical in one generation,’ sometimes, says Maudsley, ‘becomes the inborn faculty of the next; and the development takes place in accordance with that law of increasing speciality and complexity of adaptation to external nature which is traceable through the animal kingdom; or, in other words, that law of progress, from the general to the special, in development, which the appearance of nerve force among natural forces and the complexity of the nervous system of man both illustrate.’ On the other side, John Stuart Mill is just as positive that culture is not inherent. ‘Of all vulgar modes,’ he remarks, ‘of escaping from the consideration of the effect of social and moral influences on the human mind, the most vulgar is that of attributing the diversities of conduct and character to inherent natural differences;’ and, says Mr. Buckle, ‘we cannot safely assume that there has been any permanent improvement in the moral or intellectual faculties of man, nor have we any decisive ground for saying that those faculties are likely to be greater in an infant born in the most civilized part of Europe, than in one born in the wildest region of a barbarous country.’” (Pp. 21, 22.)

“It is easier to tell what civilization is not, and what it does not spring from, than what it is and what its origin.

“Nor, as we have seen, is this act of civilizing the effect of volition; nor, as will hereafter more clearly appear, does it arise from an inherent principle of good any more than from an inherent principle of evil. The ultimate result, though difficult of proof, we take for granted to be good, but the agencies employed for its consummation number among them more of those we call evil than of those we call good.

The isolated individual never, by any possibility, can become civilized like the social man." (P. 26.)

"For example, as I have said, and will attempt more fully to show farther on, association is the first requisite of progress. But what is to bring about association? Naked nomads will not voluntarily yield up their freedom, quit their wanderings, hold conventions and pass resolutions concerning the greatest good to the greatest number; patriotism, love, benevolence, brotherly kindness, will not bring savage men together; extrinsic force must be employed, an iron hand must be laid upon them which will compel them to unite, else there can be no civilization; and to accomplish this first great good to man—to compel mankind to take the initial step toward the amelioration of their condition—it is ordained that an evil, or what to us of these latter times is surely an evil, come forward—and that evil is War." (P. 28.)

"Then comes in superstition to the aid of progress. A successful leader is first feared as a man, then revered as a supernatural being, and finally himself, or his descendant, in the flesh or in tradition, is worshipped as a god. Then an unearthly fear comes upon mankind, and the ruler, perceiving his power, begins to tyrannize over his fellows. Both superstition and tyranny are evils; yet without war, superstition, and tyranny, dire evils, civilization, which many deem the highest good, never by any possibility, as human nature is, could be." (P. 29.)

"Institutions and principles essentially good at one time are essential evils at another time. The very aids and agencies of civilization become afterward the greatest drags upon progress.

"The very evils which are regarded as infamous by a higher culture were the necessary stepping-stones to that higher life. As we have seen, no nation ever did or can emerge from barbarism without first placing its neck under the yokes of despotism and superstition; therefore despotism and superstition, now dire evils, were once essential benefits." (P. 33.)

- "Every age and every nation has its special line of march. Literature and the fine arts reached their height in pagan Greece; monotheism among the Hebrews; science unfolded in Egypt, and government in Rome.

"In every individual there is some one talent that can be cultivated more advantageously than any other; so it is with nations, every people possesses some natural advantage for development in some certain direction over every other people, and often the early history of a nation, like the precocious proclivities of the child, points toward its future; and in such arts and industries as its climate and geographical position best enable it to develop, is discovered the germ of national character. Seldom is the commercial spirit developed in the interior of a continent, or the despotic spirit on the border of the sea, or the predatory spirit in a country wholly devoid of mountains and fastnesses. It cannot be said that one nation or race is inherently better fitted for civilization than another; all may not be equally fitted for exactly the same civilization, but all are alike fitted for that civilization which, if left to itself, each will work out." (P. 40.)

"Leisure is essential to culture; before leisure there must be an accumulation of wealth; the accumulation of wealth is dependent upon the food supply; a surplus of food can only be easily obtained in warm climates. But labor is also essential to development, and excessive heat is opposed to labor. Labor, moreover, in order to produce leisure, must be remunerative, and excessive cold is opposed to accumulation. It appears, therefore, that an excess of labor and an excess of leisure are alike detrimental to improvement." (P. 49.)

"Thus we have seen that a combination of physical conditions is essential to intellectual development. Without leisure there can be no culture, without wealth no leisure, without labor no wealth, and without a suitable soil and climate no remunerative labor." (P. 55.)

"The obvious necessity of association as a primary condition of development leaves little to be said on that subject. To the manifestation of this Soul of Progress a body social is requisite, as without an individual body there can be no manifestation of an individual soul. This body social, like the body individual, is composed of numberless organs, each having its special functions to perform, each acting on the others, and all under the general government of the progressional idea. Civilization is not an individual attribute, and though the atom, man, may be charged with stored energy, yet progress constitutes no part of individual nature; it is something that lies between men, and not within them; it belongs to society, and not to the individual; man, the molecule of society, isolate, is inert and forceless. The isolated

man, as I have said, never can become cultivated, never can form a language, does not possess in its fulness the faculty of abstraction, nor can his mind enter the realm of higher thought." (Pp. 55, 56.)

"Under the regime of universal mediocrity the nation does not advance; it is to the great men—great in things great or small—that progress is due; it is to the few who think, to the few who dare to face the infinite universe of things, and step, if need be, outside an old-time boundary, that the world owes most." (P. 57.)

"The moment two or more persons unite for the accomplishment of some purpose which shall tend permanently to meliorate the condition of themselves and others, that moment progress begins. The wild beasts of the forest, acting in unison, were physically able to rise up and extirpate primitive man, but could beasts in reality confederate and do this, such confederation of wild beasts could become civilized." (P. 58.)

"The human race has not yet attained that state of homogeneous felicity which we sometimes imagine; upon the surface we yet bear many of the relics of barbarism; under cover of manners we hide still more. War is a barbarism which civilization only intensifies, as indeed civilization intensifies every barbarism which it does not eradicate or cover up. The right of every individual to act as his own avenger; trial by combat; justice dependent upon the passion or caprice of the judge or ruler, and not upon fixed law; hereditary feuds and migratory skirmishes—these and the like are deemed barbarous, while every nation of the civilized world maintains a standing army, applies all the arts and inventions of civilization to the science of killing, and upon sufficient provocation, as a disputed boundary or a fancied insult, no greater nor more important than that which moved our savage ancestors to like conduct, falls to, and after a respectable civilized butchery of fifty or a hundred thousand men, ceases fighting, and returns, perhaps, to right and reason as a basis for the settlement of the difficulty. War, like other evils which have proved instruments of good, should by this time have had its day, should have served its purpose. Standing armies, whose formation was one of the first and most important steps in association and partition of labor, are but the manifestation of a lingering necessity for the use of brute force in place of moral force in the settlement of national disputes. Surely, rational beings who retain the most irrational practices concerning

the simplest principles of social life, cannot boast of a very high order of what we are pleased to call civilization. Morality, commerce, literature, and industry, all that tends toward elevation of intellect, is directly opposed to the warlike spirit. As intellectual activity increases, the taste for war decreases, for an appeal to war in the settlement of difficulties is an appeal from the intellectual to the physical, from reason to brute force." (Pp. 60, 61.)

"Union and co-operation spring up for purposes of protection and aggression, for the accomplishment of purposes beyond the capacity of the individual." (P. 64.)

XXII.

EXTRACTS FROM "THE ANCIENT CITY," BY FUSTEL DE COULANGES.

[Willard Small's Translation. Boston, 1874. Pp. 521-528. — *La Cité Antique*. Cinquième Edition. Paris, 1874. Lib. v., chap. iii., pp. 472-481.]

"WITH Christianity not only was the religious sentiment revived, but it assumed a higher and less material expression. While previously men had made for themselves gods of the human soul, or of the great forces of nature, they now began to look upon God as really foreign, by his essence, from human nature on the one hand, and from the world on the other. The divine Being was placed outside and above physical nature. While previously every man had made a god for himself, and there were as many of them as there were families and cities, God now appeared as a unique, immense, universal being, alone animating the worlds, alone able to supply the need of adoration that is in man." (P. 521, Small's Trans.)

"Christianity changed the nature and the form of adoration. Man no longer offered God food and drink. Prayer was no longer a form of incantation; it was an act of faith and a humble petition. The soul sustained another relation with the divinity; the fear of the gods was replaced by the love of God.

"Christianity introduced other new ideas. It was not the domestic religion of any family, the national religion of any city, or of any race. It belonged neither to a caste nor to a corporation. From its first

appearance it called to itself the whole human race. Christ said to his disciples, 'Go ye into all the world, and preach the gospel to every creature.'

"This principle was so extraordinary and so unexpected, that the first disciples hesitated for a moment; we may see in the Acts of the Apostles that several of them refused at first to propagate the new doctrine outside the nation with which it had originated. These disciples thought, like the ancient Jews, that the God of the Jews would not accept adoration from foreigners; like the Romans and the Greeks of ancient times, they believed that every race had its god, that to propagate the name and worship of this god was to give up one's own good and special protector, and that such a work was contrary at the same time to duty and to interest." (P. 522.)

"In all this there was something quite new; for everywhere, in the first ages of humanity, the divinity had been imagined as attaching himself especially to one race. The Jews had believed in the God of the Jews; the Athenians in the Athenian Pallas; the Romans in Jupiter Capitolinus. The right to practise a worship had been a privilege.

"The foreigner had been repulsed from the temple; one not a Jew could not enter the temple of the Jews; the Lacedæmonian had not the right to invoke the Athenian Pallas. It is just to say that, in the five centuries which preceded Christianity, all who thought were struggling against these narrow rules. Philosophy had often taught, since Anaxagoras, that the god of the universe received the homage of all men, without distinction. The religion of Eleusis had admitted the initiated from all cities. The religion of Cybele, of Serapis, and some others, had accepted, without distinction, worshippers from all nations. The Jews had begun to admit the foreigner to their religion; the Greeks and the Romans had admitted him into their cities. Christianity, coming after all this progress in thought and institutions, presented to the adoration of all men a single God, a universal God, a God who belonged to all, who had no chosen people, and who made no distinction in races, families, or states.

"For this God there were no longer strangers. The stranger no longer profaned the temple, no longer tainted the sacrifice by his presence. The temple was open to all who believed in God. The priesthood ceased to be hereditary, because religion was no longer a patrimony. The worship was no longer kept secret; the rites, the prayers, the dogmas were no longer concealed." (Pp. 523, 524.)

"From this great consequences flowed, as well for the relations between nations as for the government of states.

"Between nations religion no longer commanded hatred; it no longer made it the citizen's duty to detest the foreigner; its very essence, on the contrary, was to teach him that toward the stranger, toward the enemy, he owed the duties of justice, and even of benevolence. The barriers between nations or races were thus thrown down; the *pomerium* disappeared." (P. 524.)

"The people were also taught that they were all descended from the same common father. With the unity of God, the unity of the human race also appeared to men's minds; and it was thenceforth a religious necessity to forbid men to hate each other." (P. 524.)

"Christianity completes the overthrow of the local worship; it extinguishes the *prytanea*, and completely destroys the city-protecting divinities. It does more; it refuses to assume the empire which these worships had exercised over civil society. It professes that between the State and itself there is nothing in common. It separates what all antiquity had confounded. We may remark, moreover, that during three centuries the new religion lived entirely beyond the action of the State; it knew how to dispense with State protection, and even to struggle against it. These three centuries established an abyss between the domain of the government and the domain of religion; and, as the recollection of this period could not be effaced, it followed that this distinction became a plain and incontestable truth, which the efforts even of a part of the clergy could not eradicate." (Pp. 525, 526.)

"Christianity taught that only a part of man belonged to society; that he was bound to it by his body and by his material interests; that when subject to a tyrant, it was his duty to submit; that as a citizen of a republic, he ought to give his life for it, but that, in what related to his soul, he was free, and was bound only to God.

"Stoicism had already marked this separation; it had restored man to himself, and had founded liberty of conscience. But that which was merely the effort of the energy of a courageous sect, Christianity made a universal and unchangeable rule for succeeding generations: what was only the consolation of a few, it made the common good of humanity." (Pp. 526, 527.)

"Christianity is the first religion that did not claim to be the

source of law. It occupied itself with the duties of men, not with their interests. Men saw it regulate neither the laws of property, nor the order of succession, nor obligations, nor legal proceedings. It placed itself outside the law, and outside all things purely terrestrial. Law was independent; it could draw its rules from Nature, from the human conscience, from the powerful idea of the just that is in men's minds. It could develop in complete liberty; could be reformed and improved without obstacle; could follow the progress of morals, and could conform itself to the interests and social needs of every generation." (Pp. 527, 528.)

XXIII.

MR. W. R. GREG'S "ENIGMAS OF LIFE."*

SINCE these Lectures were in type I have seen Mr. W. R. Greg's suggestive essay entitled "Civilization antagonistic to the Law of 'Natural Selection.'" His line of thought, however, is not the same as that which I have been following, though I think we both start from Mr. Wallace's paper.

Mr. Greg looks on civilization as something which interferes with the operation of the law of "Natural Selection," while I look on it as the outcome of an interference with that law. There is no civilization, as I see the matter, without such interference. A state of civilization only appears when natural selection is more or less completely controlled, and the more complete the control the higher is the civilization.

Mr. Greg's paper is chiefly devoted to an examination of "the tendency in communities of advanced and complicated civilization to multiply from their lower rather than their higher specimens" (p. 118), and on this subject he says much that appears to me to support the views I have expressed as to the decay of civilizations. "It is no longer," he says, "the strongest, the healthiest, the most perfectly organized; it is not the men of the finest *physique*, the largest brain, the most developed intelligence, the best *morale*, that are 'favored' and successful 'in the struggle for existence'—that survive, that rise to the surface, that 'natural selection' makes the parents of future generations, the continuators of a picked and perfected race. . . . The va-

rious influences of our social system combine to traverse the righteous and salutary law which God ordained for the preservation of a worthy and improving humanity; and the 'varieties' of man that endure and multiply their likenesses, and mould the features of the coming times, are not the soundest constitutions that can be found among us, nor the most subtle and resourceful minds, nor the most amiable or self-denying tempers, nor the most sagacious judgments, nor even the most imperious and persistent wills, but often the precise reverse—often those emasculated by luxury and those damaged by want, those rendered reckless by squalid poverty, and those whose physical and mental energies have been sapped, and whose characters have been grievously impaired by long indulgence and forestalled desires" (pp. 103, 104). Mr. Greg's essay is largely devoted to showing that this opinion is correct, and that the result is due to the "disturbing and conflicting element" which "civilization, with its social, moral, and material complications, has introduced." (P. 103.)

Speaking of the suspension of the law of natural selection, he says: "It even dawns upon us that our existing civilization, *which is the result of the operation of this law in past ages*, may be actually retarded and endangered by its tendency to neutralize that law in one or two most material and significant particulars" (p. 98). The words which I have put in italics show that Mr. Greg regards civilization in early stages as the actual result of the uncontrolled operation of the law of natural selection, which is the opposite of the view I have taken. Farther on he says: "My thesis is this; that the indisputable effect of the state of social progress and culture we have reached, of our high civilization in its present stage and actual form, is to *counteract and suspend* the operation of that righteous and salutary law of 'natural selection' in virtue of which the best specimens of the race—the strongest, the finest, the worthiest—are those which survive, multiply, become paramount, and take precedence; succeed and triumph in the struggle for existence, become the especial progenitors of future generations, continue the species, and propagate an ever-improving and perfecting type of humanity." (Pp. 98, 99.)

Mr. Greg says: "A republic is *conceivable* . . . in which all candidates for the proud and solemn privilege of continuing an untainted and perfecting race should be subjected to a pass or a competitive examination, and those only be suffered to transmit their names and families to future generations who had a pure, vigorous, and well-developed constitution to transmit; so that paternity should be the right and

function exclusively of the *elite* of the nation, and humanity be thus enabled to march on securely and without drawback to its ultimate possibilities of progress." According to my views such a "republic" would necessarily be in a very low state of civilization. Mr. Greg goes on to say: "But no nation—in modern times, at least—has ever yet approached or aimed at this ideal; . . . no government and no statesman has ever yet dared thus to supplement the inadequacy of personal patriotism by laws so sapiently despotic. The faces of the leading peoples of the existing world are not even set in this direction—at present notably the reverse. . . . We are learning to insist more and more on the freedom of the individual will, the right of every one to judge and act for himself. We are growing daily more foolishly and criminally lenient to every natural propensity, less and less inclined to resent, or control, or punish its indulgence. We absolutely refuse to let the poor, the incapable, the lazy, or the diseased die." Such things as these, though perhaps described somewhat differently, I have treated as the usual marks of a ripe civilization—though marks of a ripeness which may indicate approaching decline.

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PART II.

WHAT IS CIVILIZATION?

LECTURE I.—WHAT IS CIVILIZATION?—2. HOW DOES THE LAW OF NATURAL SELECTION AFFECT MAN?

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